aiwa

OPERATING INSTRUCTIONS HV-FX77K

VIDEO CASSETTE RECORDER

PAL

VHS
PAL

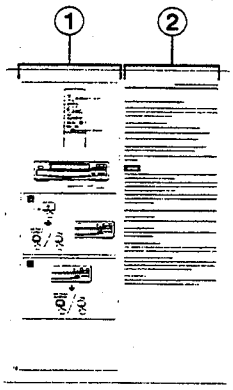
VIDEO Plus+ TM

Welcome to the AIWA HV-FX77

Thank you for your purchase of this AIWA product.
To optimize the performance of this unit, please read through this manual carefully, and master the operations which it describes.

This manual is organized as follows:

- The text contains the instruction, while the illustrations ① help to visualize the procedure.
- Step numbers in the illustration frames correspond to the step numbers in the text, while letters and numbers which refer to specific parts of the illustration are explained within the text ②.



WARNING

(FOR USE IN THE UNITED KINGDOM)

This appliance is supplied with a fitted three pin mains plug. A 3 amp fuse is fitted in the plug.
Should the fuse need to be replaced, use a 3 amp fuse approved by ASTA or BSI to BS1362. When replacing the fuse, you must ensure that any removable fuse covers are correctly refitted.
If you should lose the fuse cover, please contact your nearest AIWA dealer.

DO NOT CUT OFF THE PLUG FROM THIS APPLIANCE. If the plug fitted is not suitable for the power points in your home, or the cable is too short to reach a power point, obtain an appropriate safety approved extension lead or adaptor. If in any doubt please consult a qualified electrician.

If the plug is cut off, remove the fuse and dispose of the plug immediately. **THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**

If a new plug is to be fitted please ensure it contains a 3 amp fuse, otherwise the circuit should be protected by a 5 amp fuse at the distribution board.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

BLUE — NEUTRAL
BROWN — LIVE

As the colours of the wires in the mains lead of this appliance may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked by the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked by the letter L or coloured RED.

DO NOT connect either the BLUE or BROWN wire of the mains lead to the earth terminal (marked with the letter E or by the earth symbol ⏚ or coloured GREEN or GREEN/YELLOW) of a three pin plug.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

VIDEO Plus+™

Video Plus+ and PlusCode are trademarks of Gemstar Development Corp. Video Plus+ system is manufactured under license from Gemstar Development Corporation.

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PRECAUTIONS

IMPORTANT

1) With this unit, use only cassettes marked VHS.

2) This video cassette recorder is designed to receive TV programmes and to record and play back signals for the PAL colour system.

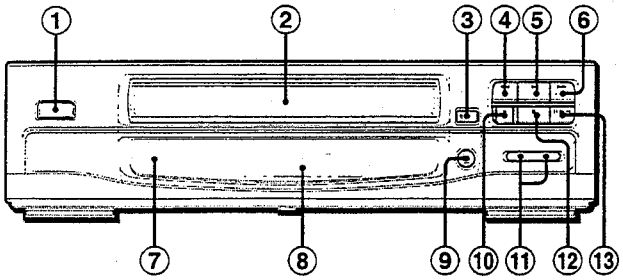
3) This unit records and plays back signals in the SP (Standard Play) mode or LP (Long Play) mode.

4) Audio/video material may consist of copyrighted works which must not be recorded without the authorization of the owner of the copyright. Please refer to the relevant law of your country.

CAUTION

1) Do not attempt to open the cabinet. There are no parts inside you can service yourself. Refer all servicing to qualified service personnel.
2) To ensure reliable operation, and to protect the unit from overheating, the ventilation slots and openings must not be blocked or covered. Avoid placing the unit in enclosed spaces such as a bookcase, unless there is adequate ventilation.
3) Keep the unit away from radiators and other heat sources.
4) Avoid using the unit near strong magnetic fields.
5) Do not push objects of any kind into this unit through the cabinet slots as they could touch current carrying parts or short-circuit parts, resulting in fire, electric shock, or damage to the unit.
6) Be careful not to spill liquid of any kind on this unit. If liquid is spilled into the unit, immediately unplug from the mains and consult a qualified service engineer.
7) Use this unit in the horizontal (flat) position only.
8) If TV picture or sound is affected, move the unit away from the TV.
9) Install the unit at least 1 meter away from radios and receivers. Otherwise, noise may occur during radio reception.
10) Do not place heavy objects on the unit.
11) Unplug the unit from the mains when it is not to be used for a long period of time.
12) When there is lightning, unplug the unit from the mains immediately. Never touch the aerial wire during a lightning storm.

NAMES AND FUNCTIONS OF CONTROLS



FRONT PANEL

① POWER button

To turn the unit on/off.

② Cassette compartment

③ EJECT button (⏏)

To eject a cassette from the unit.

④ Rewind/reverse visual search button (◀◀/REW/⏮)

To rewind the tape, or to start a reverse visual search.

⑤ PLAY button (▶)

To start playback.

⑥ Fast forward/forward visual search button (⏭/F FWD/ ▶▶)

To fast forward the tape, or to start a forward visual search.

⑦ REMOTE SENSOR

Receives the intra-red signals from the remote control.

⑧ Display window

See page 6 for each display item.

⑨ ONE-TOUCH PLAYBACK button

Lights after a recording is made.
To rewind and play back the tape automatically after a recording.

⑩ Recording button (● REC)

To start recording.

⑪ CHANNEL buttons (∨∧)

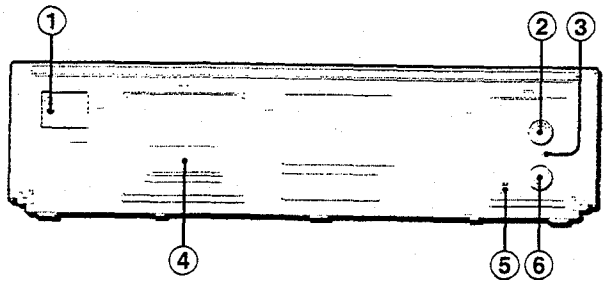
To cyclically choose preset channels.

⑫ STOP button (■)

To stop the tape.

⑬ PAUSE/STILL button (II/▶I◀)

To temporarily stop the tape during playback or a recording. Press the ▶ PLAY or ● REC button to resume playback or recording.



REAR PANEL

① AC inlet (~)

Connect the supplied mains lead.

② AERIAL connector

Connect to an external aerial.

③ CHANNEL selector (30 – 39)

To choose the channel on which the signal from this unit is transmitted to the TV.

④ 21-pin AUDIO/VIDEO connector

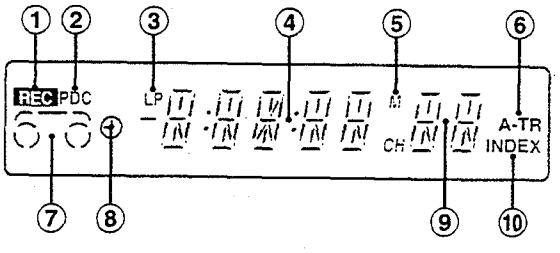
Connect a scart connecting cable to the audio/video input of a TV or other external equipment.

⑤ TEST SIGNAL switch

To display a test signal on the TV when setting the video channel.

⑥ RF OUT connector

Connect to the aerial input of a TV.



DISPLAY WINDOW

① REC (recording) indicator

Lights during recording.

② PDC (Programme Delivery Control) indicator

Lights when the unit receives a PDC signal.
Lights when the unit enters a timer recording standby mode if there is a timer programme with the PDC system ON.

③ LP (Long Play) indicator

Lights when a recording at LP speed is chosen or a tape recorded at LP speed is played back.
When a recording at SP (Standard Play) speed is chosen or a tape recorded at SP speed is played back, the indicator goes off.

④ Clock/tape counter/tape operation display

Shows the current time, linear tape counter or tape operation mode.

⑤ Counter memory indicator

Shows M when the counter memory function is activated.

⑥ A-TR (Automatic tracking) indicator

Lights when the automatic tracking is activated. Flashes when the tracking is being adjusted.

⑦ Cassette indicator

Lights when a cassette is loaded. Flashes at various speeds according to tape operation.
Flashes when a cassette is ejected.

⑧ Timer recording indicator (⏲)

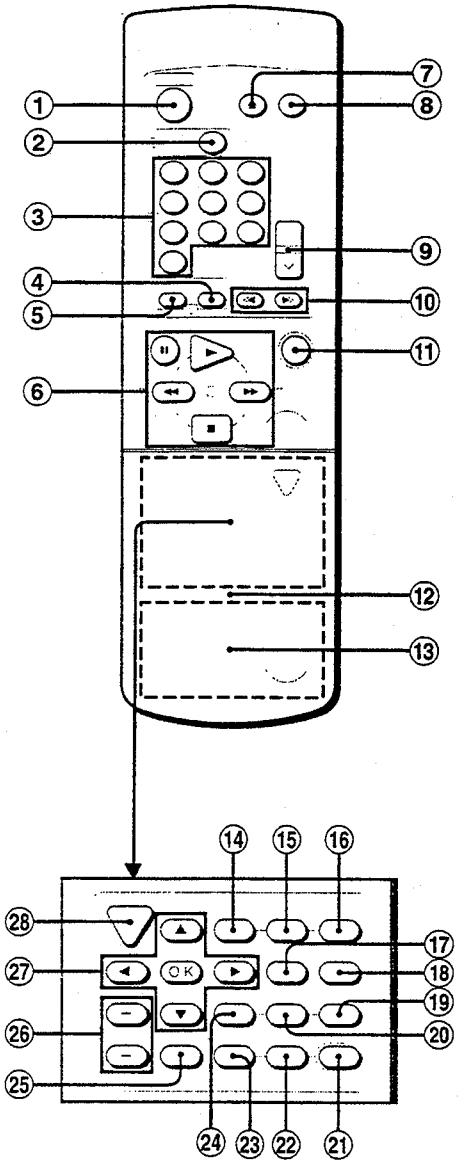
Lights when the unit is standing by for a timer recording.

⑨ TV channel number, auxiliary input display/index counter

Shows the channel currently chosen. Shows "AU" when auxiliary input is chosen.
Shows the index number during an index search operation.

⑩ INDEX search indicator

Lights during an index search operation.



REMOTE CONTROL

You can control all the functions of the unit with the infra-red remote control. Buttons with the same name as the main unit have the same function.

① **POWER button**

② **VIDEO PLUS+ button**
To turn the VIDEO Plus+ programming mode on/off.

③ **Number buttons (0 – 9)**
To choose channel numbers directly.

④ **ENTER button**
To enter the PlusCode number when setting a VIDEO Plus+ recording programme.

⑤ **CLEAR button**
To cancel a VIDEO Plus+ programme or a timer recording programme.

⑥ **Tape operation buttons**

⑦ **EJECT button (⏏)**

⑧ **OTPB (One Touch Playback) button**

⑨ **CHANNEL buttons (∧∨)**

⑩ **SEARCH (visual search) buttons (◀◀▶▶)**
To change the playback and search speed.

⑪ **REC/QTR (recording/quick timer recording) button (●)**
To start recording.
To activate quick timer recording, press the button twice.

⑫ **Remote control lid**
Slide down to open the lid when using the buttons inside or replacing the batteries.

⑬ **Battery compartment**

⑭ **PDC (Programme Delivery Control) button**
To turn the PDC system on/off.

⑮ **D (Daily)/WLY (Weekly) button**
To choose daily or weekly recording in VIDEO Plus+ programming mode.

⑯ **ADD T (Time) button**
To extend the recording duration in VIDEO Plus+ programming mode.

⑰ **SP/LP button**
To choose the recording speed.

⑱ **INDEX button**
To choose the number of index signals for which to search.

⑲ **DISPLAY button**
To change the on-screen display mode.

⑳ **RESET button**
To reset the tape counter to zero (0:00:00).

㉑ **AUTO SET button**
To activate the AUTO SET function.

㉒ **CLOCK SET button**
To start setting the clock.

㉓ **CH NO. (Channel Number) SET button**
To change the channel number for the station which was preset in an incorrect channel number.

㉔ **MEMO (Memory) button**
To activate the counter memory function.

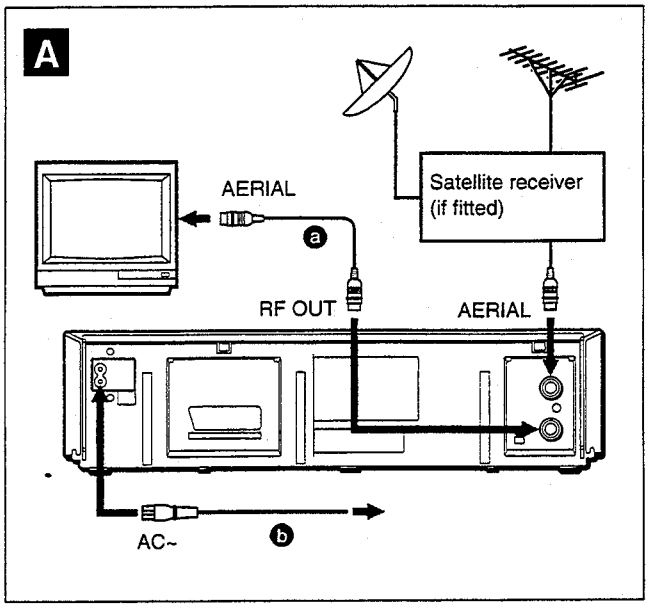
㉕ **A-TR (Automatic Tracking) button**
To have the tracking adjusted automatically.

㉖ **+ – buttons**
To set the clock or a timer recording.

㉗ **Cursor (◀ ▶ ▲ ▼)/OK buttons**
To move the cursor or set the items and to store the items.

㉘ **MENU button**
To turn the main MENU screen on/off.

CONNECTING AERIAL–SATELLITE-VIDEO–TV



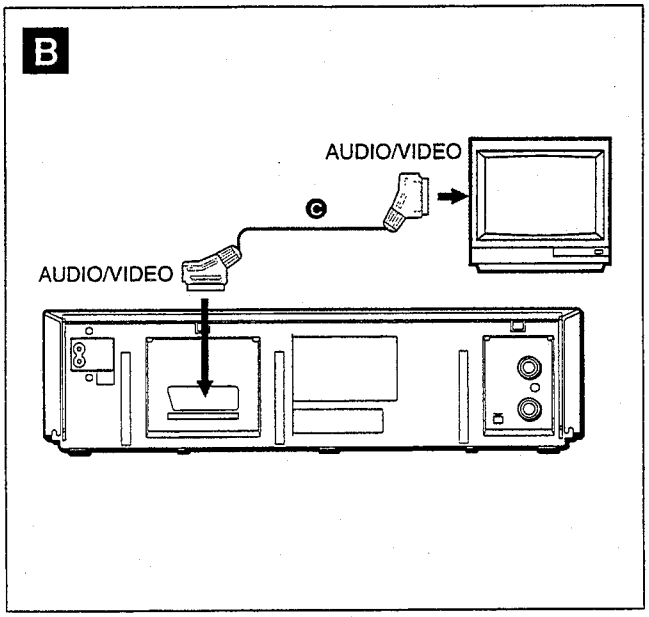
FOR A TV WITHOUT AUDIO/VIDEO INPUT JACKS A

1 **Disconnect the TV aerial coaxial cable from the TV receiver and connect it to the AERIAL connector on this unit.**

2 **Connect the supplied aerial cable ⓐ to the RF OUT connector on this unit and to the AERIAL connector on the TV.**

3 **Connect the supplied mains lead ⓑ to the AC inlet and plug it into the mains.**

4 **Set the video channel.**
See "TUNING THE TV TO THE VIDEO" on page 9.

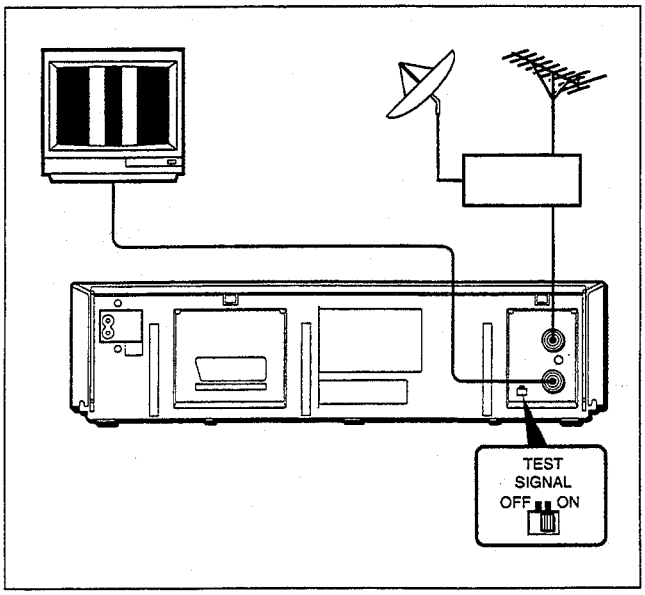


FOR A TV WITH A 21-PIN AUDIO/VIDEO CONNECTOR B

In addition to the above connections, connect the unit to the TV receiver with an optional 21-pin audio/video scart cable ⓒ. Setting of the video channel is not necessary.

To receive audio/video output from this unit on the TV
Turn on both the TV and this unit. When your TV is connected only through the aerial cable ⓐ, choose the video channel on the TV. When your TV is connected with a 21-pin audio/video scart cable ⓒ, choose the video input mode on the TV.

TUNING THE TV TO THE VIDEO



When this unit is connected to the TV only through the supplied aerial cable, the video channel should be set.
If this unit is connected via a 21-pin audio/video scart cable, skip this section.

1 **Press the POWER button on the main unit to turn on the unit.**

"1 CH" appears in the display window on the front of the main unit.

2 **Set the TEST SIGNAL switch to ON to generate a test pattern.**

3 **Turn on the TV and choose a free channel you wish to use for video playback.**

4 **Tune in the TV using the tuning procedure for your TV until a black and white test pattern can be seen clearly.**

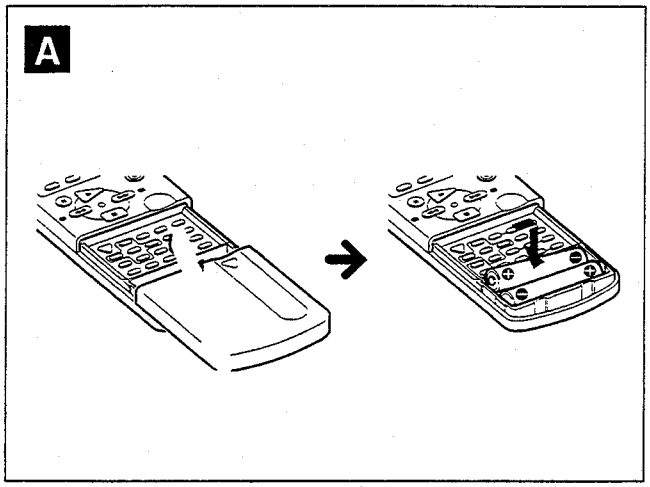
Some TV receivers have a specific recommended channel to which they should be set for use with the VCR. Please refer to the TV handbook if available.

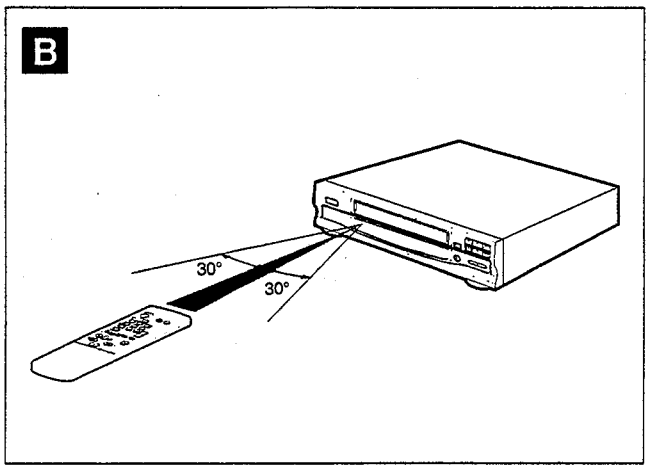
5 **When tuning is completed, set the TEST SIGNAL switch to OFF.**

The TV screen now turns blue, and the channel chosen is set to the video channel.

NOTE

If there is interference on the screen because of broadcasts on neighbouring channels, shift the video channel from UHF channel 36 by adjusting the CHANNEL selector to a channel between 30 and 39. Consult your supplying dealer before making this adjustment.





INSTALLING BATTERIES A

1 **To open, slide the lid on the front panel of the remote control.**

2 **Insert two R6 (size AA) batteries (supplied).**
Make sure the batteries are inserted with the correct polarity.

3 **Close the lid.**

NOTE

Incorrect battery use may cause leakage or bursting. Observe the following precautions:

- Insert the batteries with the correct polarity, as indicated inside the battery compartment.
- Do not mix new batteries with old ones.
- Do not mix different kinds of batteries.
- Remove the batteries when they are exhausted, or when the remote control will not be used for a long period of time.

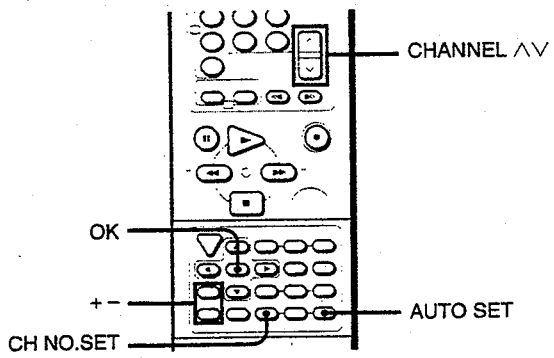
USING THE REMOTE CONTROL B

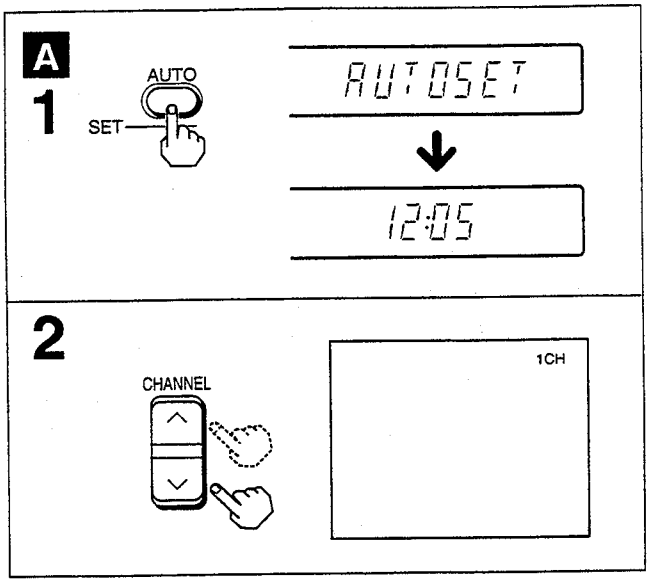
Point the remote control toward the infra-red REMOTE SENSOR on the front of this unit.

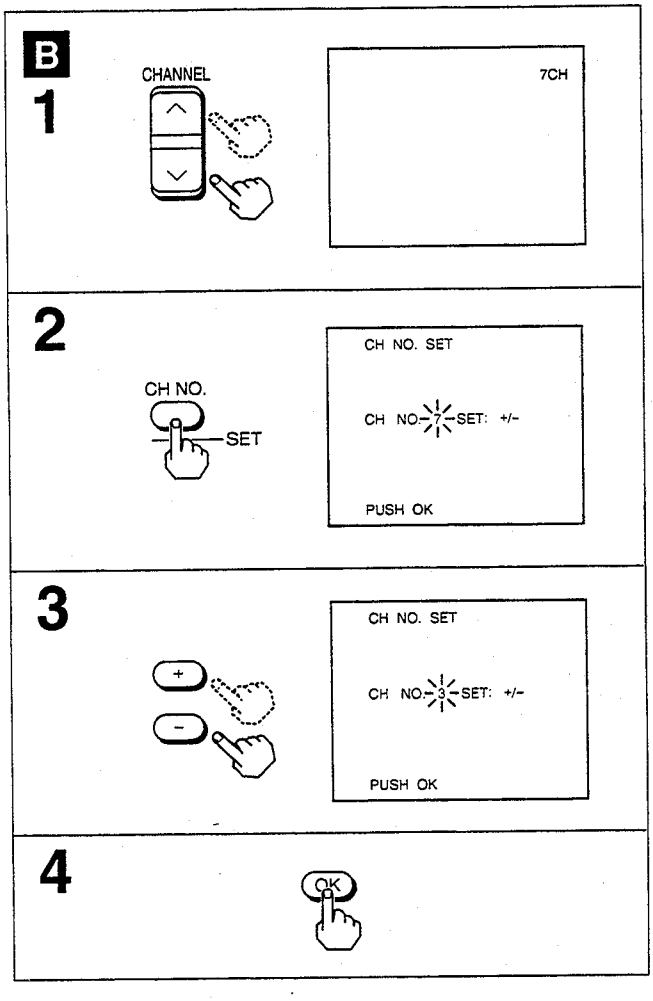
Hints for correct operation

- For correct operation, there should not be an obstruction between the remote control and the REMOTE SENSOR.
- When there is a strong ambient light source, e.g. fluorescent lamp, strong sunlight, the performance of the infra-red REMOTE SENSOR is impaired, which may cause unreliable operation.
- The recommended effective distance for wireless operation is 7 metres (23 feet). Operation can be performed at an angle of up to 30° from either side, but the effective distance becomes somewhat shorter.
- Using TVs with the same type of infra-red remote control facing the same direction may cause the unit to operate incorrectly.

SETTING UP THE VIDEO A







Once this unit is connected to an aerial and the TV, and is then plugged into the mains (page 8), the unit is tuned in and the date and time is set automatically by pressing the AUTO SET button.
If a satellite receiver or a cable box is connected, make sure it is turned on and set to SKY NEWS.

Preparations

- Turn on this unit.
- Have the TV on and tuned to the video channel or video input mode on the TV. (See page 9.)

1 Hold down the AUTO SET button on the remote control for a few seconds.

"AUTO SET" appears on the front display of the main unit.
The unit will be tuned in and the correct date and time will be set. This will take about 4 minutes. After AUTO SET has been completed, the current time appears on the display.

2 Press the CHANNEL ∧∨ buttons to check that the correct TV station is preset on each channel number.

Channel number	TV station
1CH	BBC1
2CH	BBC2
3CH	ITV
4CH	CH4
5CH	CH5 (if available)
6CH	CATV/SAT* (SKY NEWS) (if connected)

* If this unit is connected to the TV via a 21-pin audio/video scart cable (page 8), this setting is not necessary.

NOTE

- If "AERIAL" appears on the display during the AUTO SET procedure, check the aerial connection. If a satellite receiver or a cable box is connected, check that it is turned on and is set to SKY NEWS. If "AERIAL" still remains even after checking, tune in the unit manually. (See page 16.)
- If "SET TIME" appears on the display during the AUTO SET procedure, the broadcasting signal is weak. Set the date and time manually. (See page 14.)
- In some areas, two or more ITV broadcasts may be preset. If the desired broadcast is not allocated in 3CH, change it to 3CH. (See below B.)
- When you move to a different area of the country, perform the AUTO SET procedure again.

If the TV station displayed does not match the correct channel number B

When a TV station's signal is weak, it may be preset in 7CH or higher. In this case, change the channel number to correspond with the TV station.

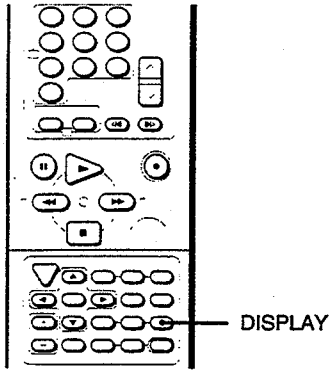
1 Press the CHANNEL ∧∨ buttons to choose the channel number to be changed.
2 Press the CH NO. SET button on the remote control.
The CH NO. SET screen appears.
3 Enter the correct channel number using the + – buttons on the remote control.
4 Press the OK button.

NOTE

If, during step 3, a TV station is preset on the channel to which you want to change, the channel number does not appear on the screen. Erase that station or preset it to another channel.

Example: To change 7CH to 3CH on which another TV station is preset.
① Choose 3CH with the CHANNEL ∧∨ buttons, then press the CH NO. SET button.
② • To erase 3CH, press the CLEAR button and the OK button.
• To change 3CH to another available channel number, enter the number with the + – buttons, then press the OK button.
③ Change 7CH to 3CH following steps 1 to 4 above B.

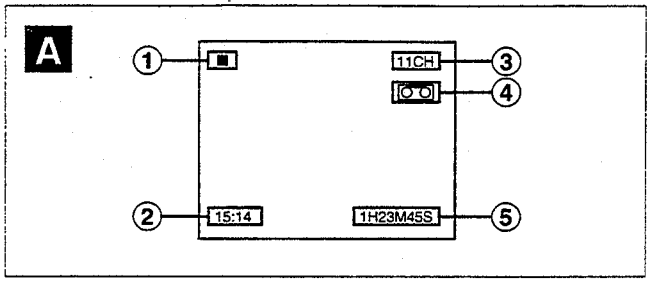
ON-SCREEN FUNCTION DISPLAY



The video operation mode can be displayed on the screen while you are playing back a tape or watching a broadcast on the video channel. The channel position and the linear tape counter can also be shown.

Preparation
Have the TV on and tuned to the video channel or video input mode. (See page 9.)

ON-SCREEN DISPLAY ITEMS A



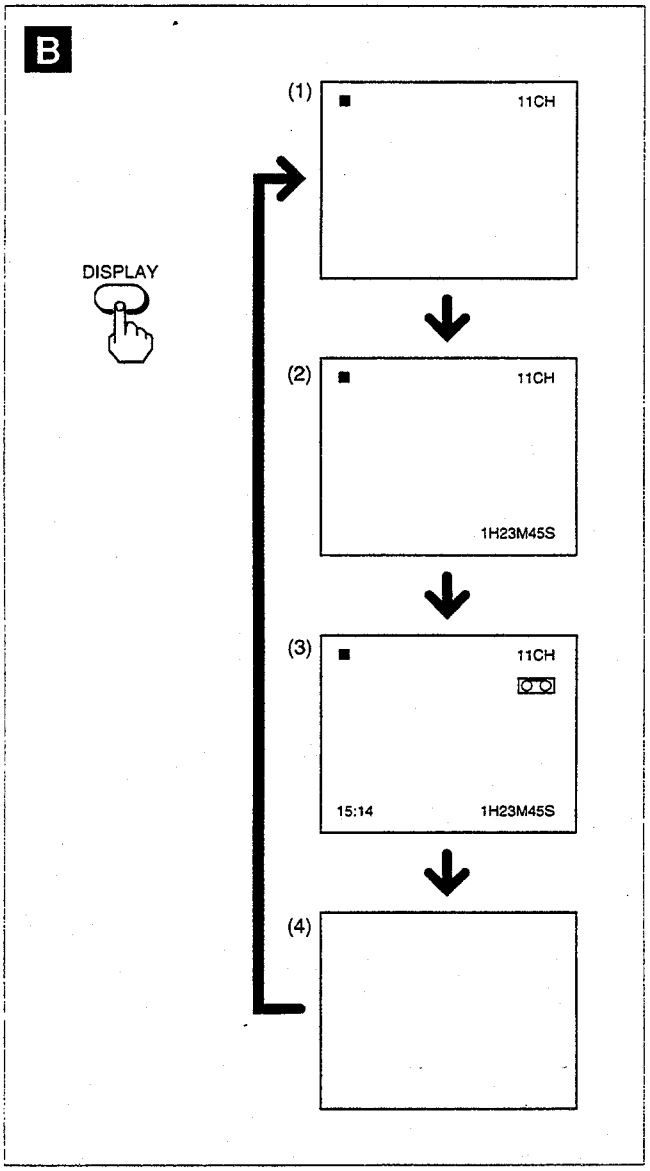
① Operation mode indicator

Current tape operation is shown with the following marks:

►	: Play	◄◄→►	: Function memory (This mark signifies playback after rewinding.)
◄◄REW	: Rewind	►►FF	: Fast forward
⏏	: Cassette out	■	: Stop
●II LP	: Recording pause, tape speed (This mark signifies a pause in LP recording mode.)	● SP	: Recording, tape speed (This mark signifies a recording in SP mode.)
0 ⊃ ►►	: Fast forward or rewind in counter memory mode (This mark signifies a fast forward.)	I◄◄-1	: Index search, count number

② Current time
③ Channel number/LINE
④ Cassette-in indicator
⑤ Linear tape counter

TO DISPLAY THE INDICATORS B



Press the DISPLAY button.
Each press changes the on-screen display as illustrated.

(1)AUTO display

When the video operation mode is changed, the affected indicator is displayed in the area for 5 seconds.
During the index search or function memory, the corresponding indicator is shown.

(2)COUNTER display

The tape counter is continuously displayed. Other indicators are displayed as in AUTO display.

(3)FULL display

All indicators (areas) are displayed.

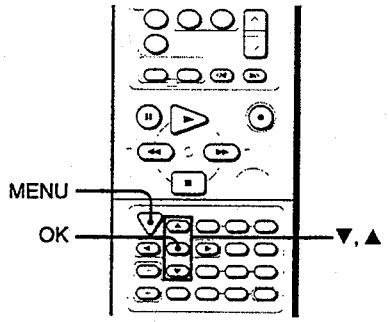
(4)Display off

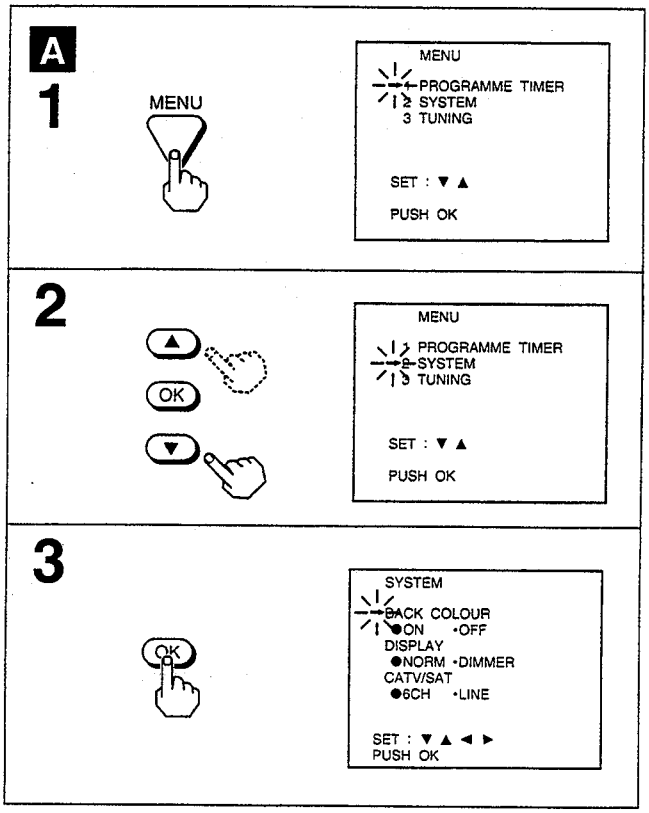
All indicators disappear.

NOTE

- When the power is interrupted or the mains lead is disconnected for more than 2 minutes, the on-screen function display is set to the AUTO display.
- When you record a video signal output from this unit on another VCR, set the on-screen function display to off. (If the mode indicator is displayed on the screen, it is also recorded on the tape.)

ON-SCREEN DISPLAY (OSD) MENU





Timer programmes, tuning, and other set-up operations can be carried out using an on-screen display (OSD) menu system which guides you through each step. With the main unit turned on, use the remote control to access the various menu screens.

Preparation
Have the TV on and tuned to the video channel or video input mode. (See page 9.)

TO ACCESS THE OSD MENUS A

1 Press the MENU button.
The main MENU screen appears.

2 Press the ▼ or ▲ button to move the cursor down or up.

3 At the desired operation, press the OK button.
The menu for the chosen operation appears.
Each menu explains which buttons to press to perform the chosen operation.
The illustration shows the SYSTEM menu.

TO EXIT OR CLEAR AN OSD MENU
Press the MENU button again.

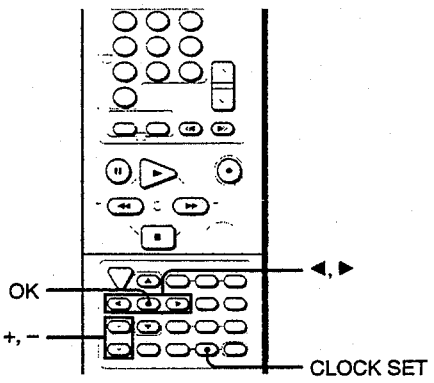
MAIN MENU OPERATIONS

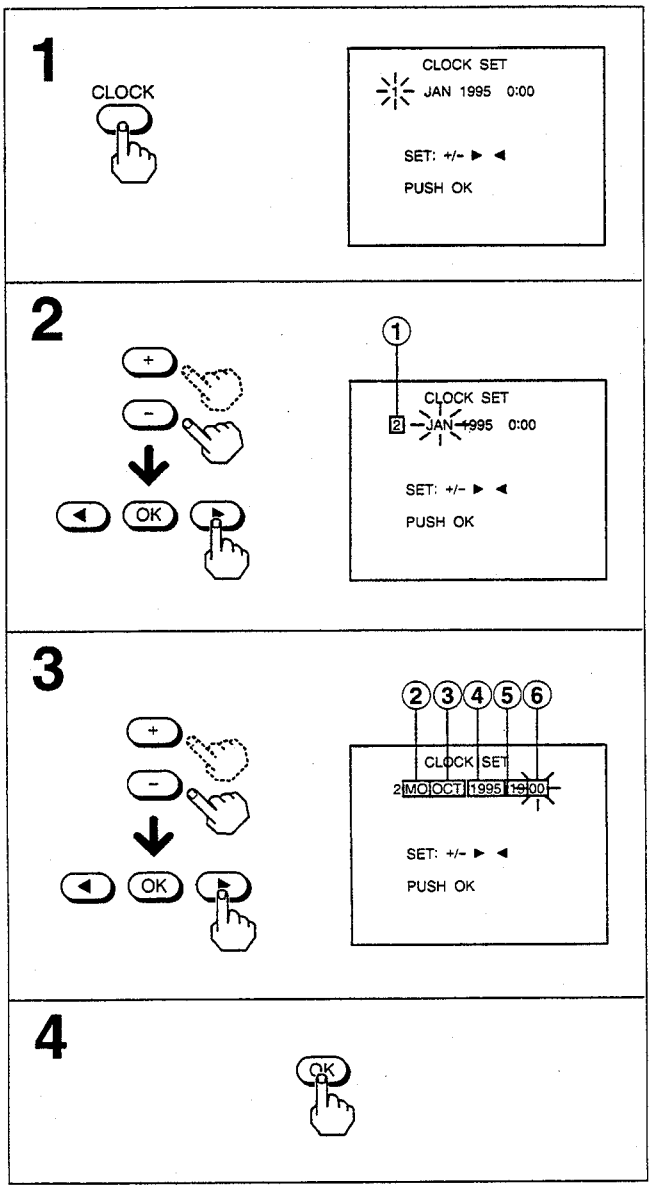
1 PROGRAMME TIMER
To set the programme for a timer recording. See page 26.

2 SYSTEM
To set some optional set up choices. See page 15.

3 TUNING
To preset channels manually. See page 16.

SETTING THE CLOCK





Set the date and time to use a timer recording. If the correct date and time is set with the AUTO SET feature, this procedure is not required. Follow this procedure when the clock should be set manually.

1 Press the CLOCK SET button.

The CLOCK SET screen appears.
The day section flashes.

2 Set day ① with the + or – button, then press the ► button.

The month section flashes.

3 Using the + or – and ► buttons, set month ③, year ④, hour ⑤ and minute ⑥ in the same way as in step 2.

The day of the week ② will automatically appear when the year has been set.

4 At a time signal, press the OK button.

The clock begins to work.

To correct the setting

While setting, press the ◄ or ► button so that the item to be corrected flashes, and re-enter with the + or – button.

USING THE SYSTEM MENU

(MENU 2)

Under the SYSTEM menu, set up the unit for different operating modes. Adjust the settings to fit your particular needs.

1 Press the MENU button.

The main MENU screen appears.

2 Choose "2 SYSTEM" from the MENU screen.

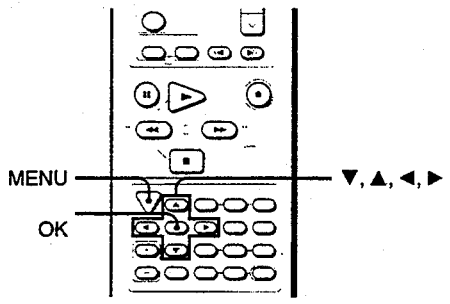
Press the ▼ or ▲ and OK buttons.
The SYSTEM screen appears.

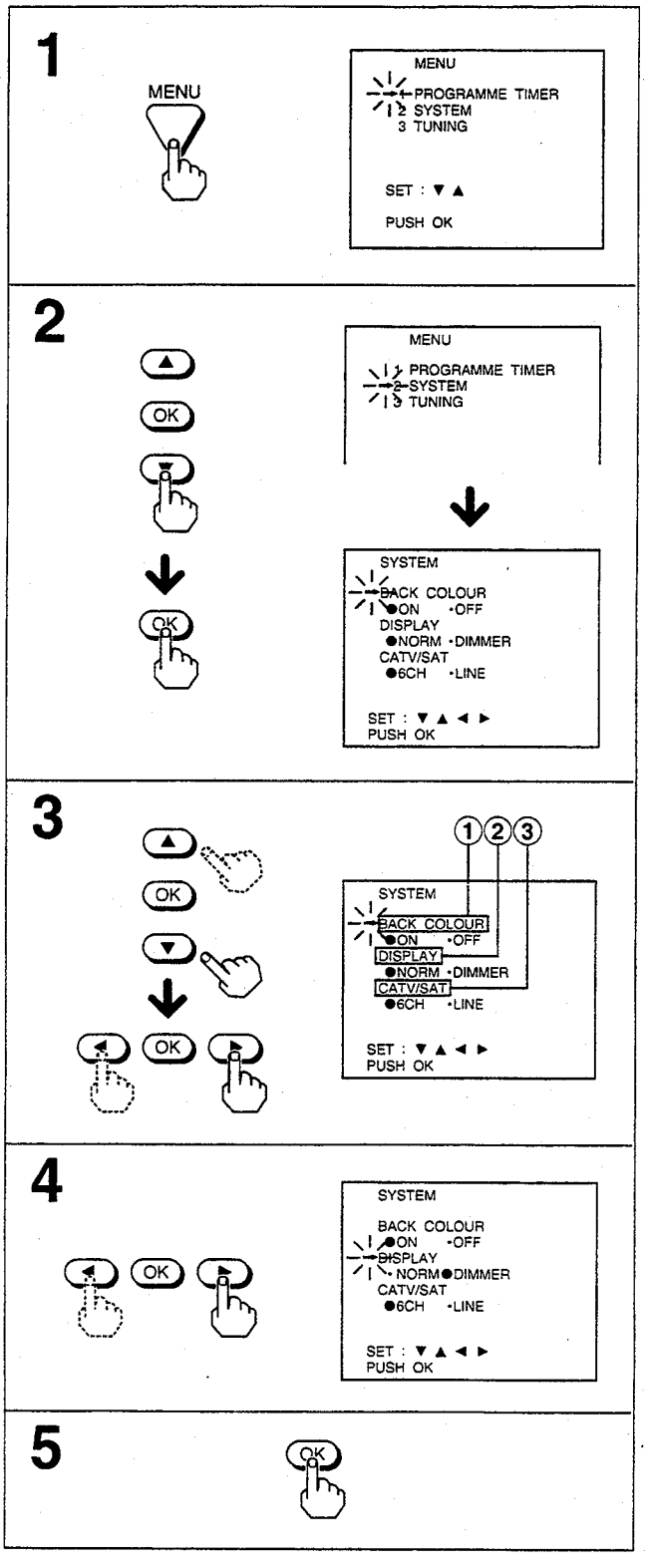
3 Choose the item to change with the ▼ or ▲ button.

The item chosen flashes. (Each item is explained below.)

4 Change the setting with the ◄ or ► button.

5 Press the OK button.





SYSTEM MENU ITEMS

BACK COLOUR ①

When the BACK COLOUR position is "ON", a blue background screen appears during playback of unrecorded portions of a tape, or during periods of no TV signal reception.
When the position is "OFF", even during periods of no TV signal reception, no blue screen appears.

DISPLAY ②

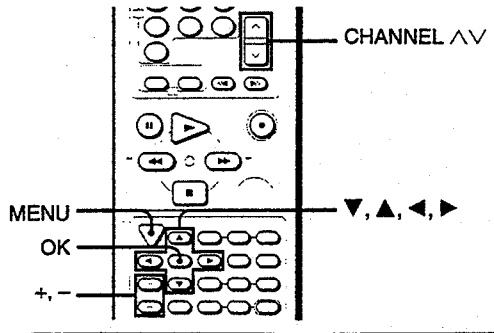
When the DISPLAY position is "NORM", the display window on the front of this unit is brighter.
When the position is "DIMMER", it becomes dim.

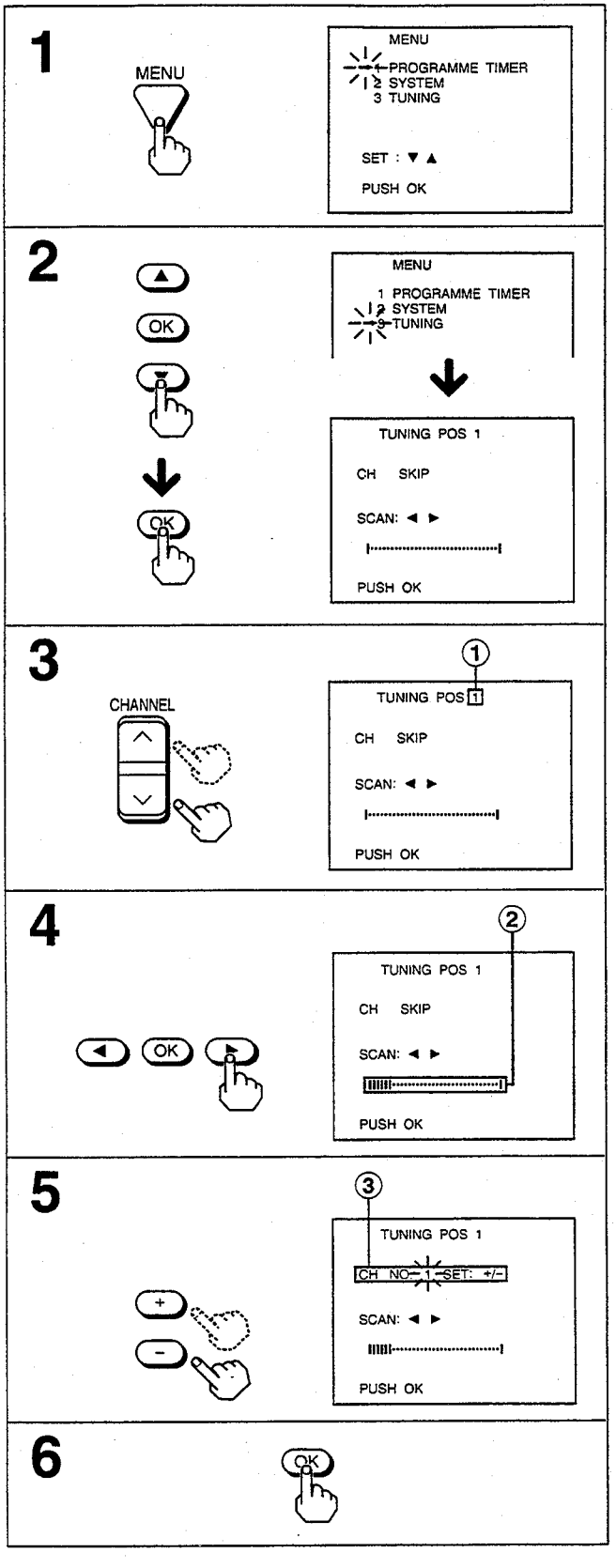
CATV/SAT ③

If a satellite receiver or a cable box is connected and the connection between this unit and the TV is made using only the aerial cable, set this position to "6 CH" before programming a timer recording using VIDEO Plus+ programming system.
If a satellite receiver or a cable box is connected and the connection is made via a 21-pin audio/video scart cable, set the position to "LINE".

NOTE

The setting of the SYSTEM screen is retained after the unit is unplugged from the mains.





TUNING IN THE VIDEO

(MENU 3)

Up to 32 TV channels can be manually preset in the internal tuner. If this unit is correctly tuned in with the AUTO SET function, this procedure is not required.

1 Press the MENU button.

The main MENU screen appears.

2 Choose "3 TUNING" from the MENU screen.

Press the ▼ or ▲ and OK buttons.
The TUNING screen appears.

3 Choose tuning position number ① with the CHANNEL ∧∨ buttons.

Tuning position number ① stands for the order of the channel tuned in. The number does not appear on the display of the main unit or on the screen during VCR operation.

4 Press the ► button.

The unit starts scanning up and scan bar ② appears. When the ◄ button is pressed, the unit will scan down. When the first station in your area is received, a picture appears on the TV screen.

5 Using the + or – button choose the channel number ③ for that station so that it corresponds to the following channel number.

Channel number ③ is a number displayed on the screen and on the display of the main unit during VCR operation.

Channel number	TV station
1CH	BBC1
2CH	BBC2
3CH	ITV
4CH	CH4
5CH	CH5 (if available)
6CH	CATV/SAT* (SKY NEWS) (if connected)

* If this unit and the TV is connected via a 21-pin audio/video scart cable, this setting is not necessary.

6 Repeat steps 3 to 5 until the required stations have been stored.

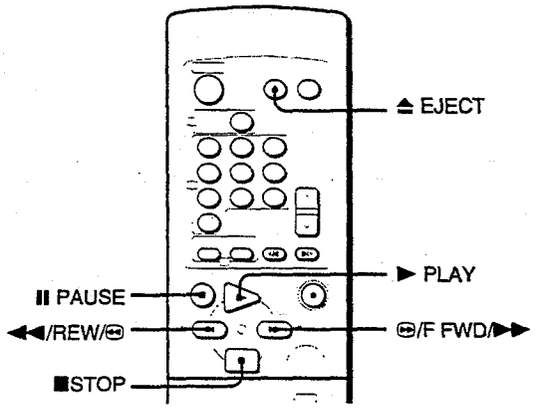
7 Press the OK button when finished.

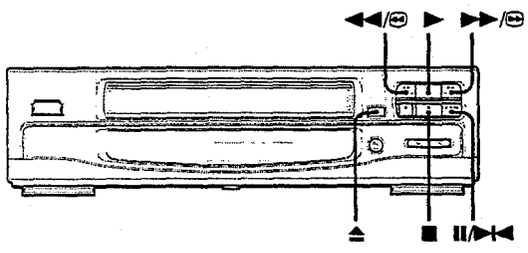
The channels can now be chosen cyclically with the CHANNEL ∧∨ buttons.

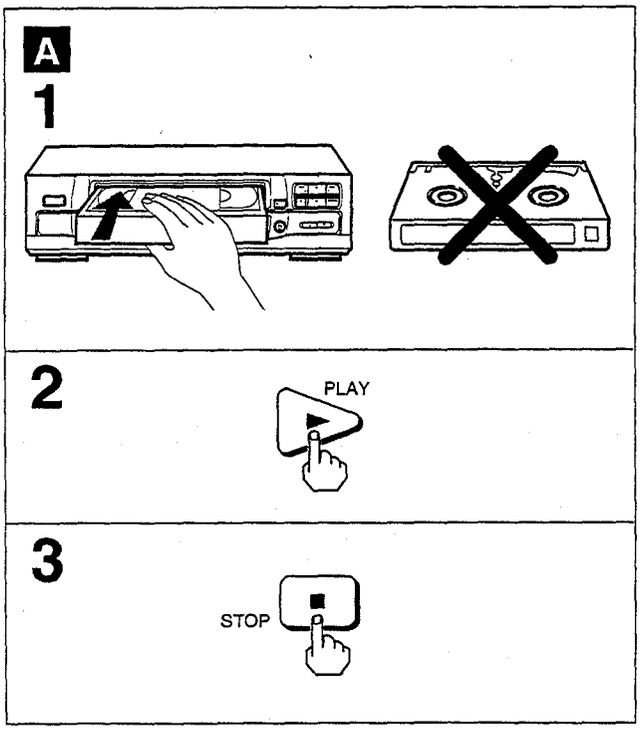
To erase a preset channel

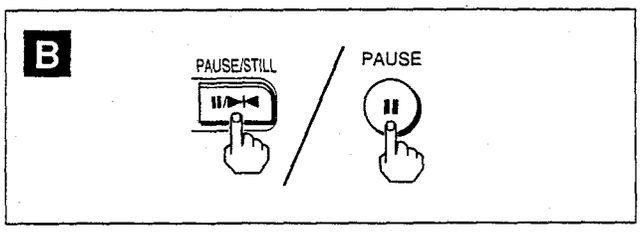
In the TUNING screen, choose the channel number to be erased with the CHANNEL ∧∨ buttons, then press the CLEAR button.
When you press the CHANNEL ∧∨ buttons, that channel will be skipped.

PLAYING BACK A TAPE A









Preparation
Have the TV on and tuned to the video channel or video input mode. (See page 9.)

1 Insert a cassette.

The power turns on automatically.
If the cassette does not have an erasure prevention tab, playback starts automatically.

2 Press the ▶ PLAY button to start playback.

3 Press the ■ STOP button to stop playback.

To fast forward the tape
In the stop mode, press the ⏩/F FWD/▶▶ button.

To rewind the tape
In the stop mode, press the ◀◀/REW/⏪ button.

To eject the tape
Press the ⏏ EJECT button.

NOTE

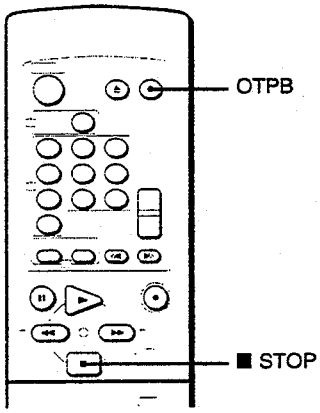
The unit automatically chooses the tape playback speed.

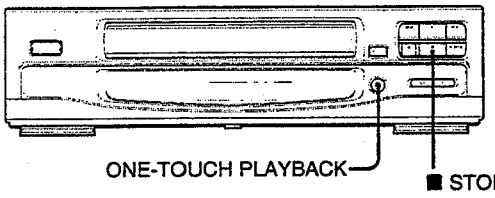
PAUSING A PICTURE — STILL PICTURE B

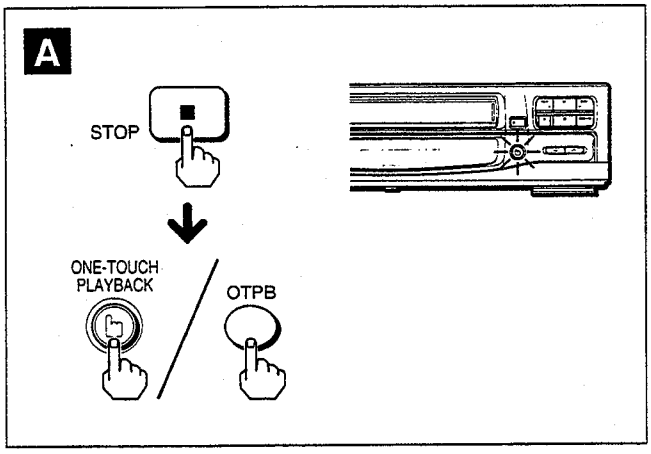
During playback, press the II PAUSE button on the remote control or the II/▶I◀ PAUSE/STILL button on the main unit. The picture "pauses" on the screen. You may use this feature to study details of a particular scene. To return to normal playback, press the ▶ PLAY button.

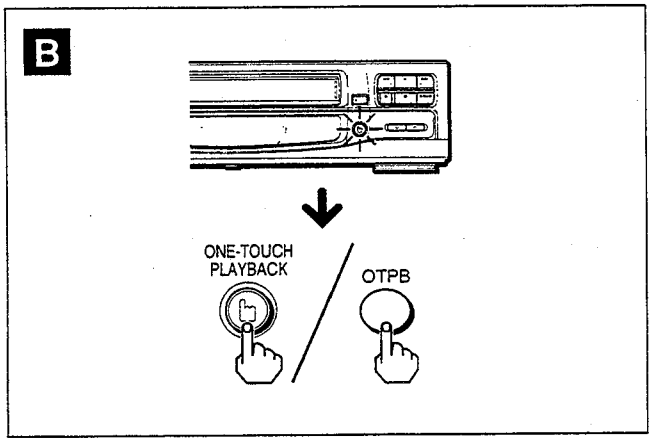
NOTE

- If the still picture mode lasts for more than 5 minutes, the unit automatically goes to the stop mode to protect the tape.
- The noise lines may not be completely removed depending on the recording quality of the tape.
- With a tape recorded at LP speed, noise lines may be present, and the colour may disappear.









ONE-TOUCH PLAYBACK

Immediately after any recording, simply press the ONE-TOUCH PLAYBACK button (or OTPB button on the remote control). The tape rewinds to the start of the recorded portion and begins playback automatically.

For regular recordings A

1 Press the ■ STOP button to stop recording.

The ONE-TOUCH PLAYBACK button on the main unit lights.

2 Press the ONE-TOUCH PLAYBACK (or OTPB) button.

For a timer recording without Video Plus+ and quick timer recording B

Press the ONE-TOUCH PLAYBACK (or OTPB) button.

When multiple timer recordings are programmed, the tape rewinds to the very first timer recording.

NOTE

- After a recording, if another operation button is pressed, the one-touch playback function is cancelled.
- The one-touch playback function does not work for a recording of less than 2 minutes.

CONVENIENT AUTOMATIC FUNCTIONS

Automatic power on

When a cassette tape is inserted, the unit automatically turns on.

Automatic playback

When a cassette without an erasure prevention tab is inserted, playback begins automatically.

Automatic record cancel

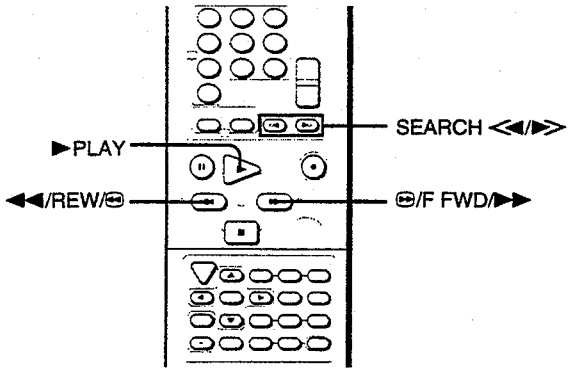
If any of the recording buttons are pressed while a cassette without an erasure prevention tab is inserted, the tape is automatically ejected.

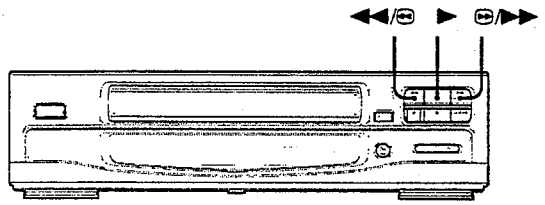
Automatic rewind/eject/power off

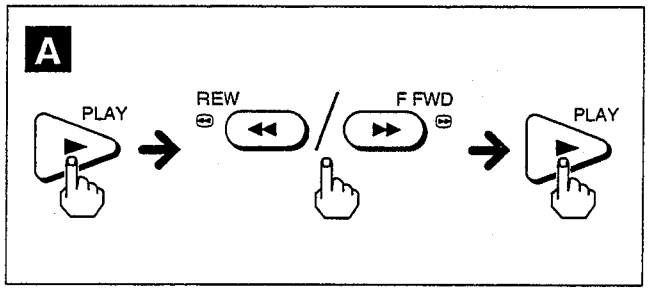
When a tape reaches the end during playback, fast forward or forward visual search, the tape is automatically rewound to the beginning and ejected. Then the power is turned off.

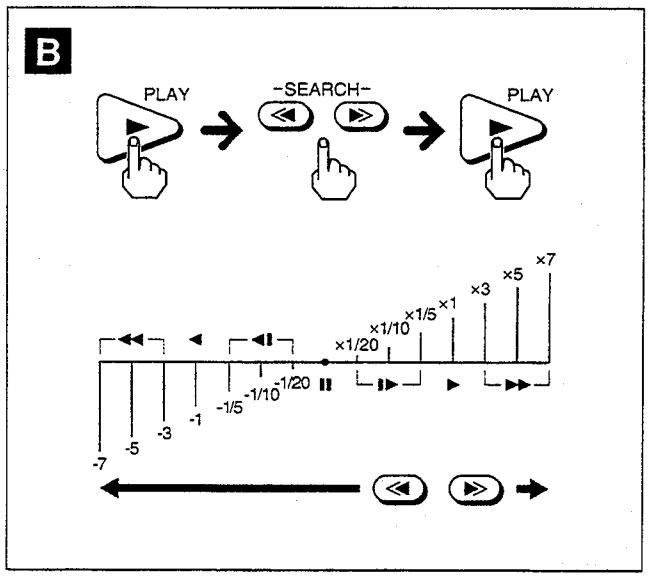
Power off eject

If the ⏏ EJECT button is pressed when the power is off, the power turns on, the cassette is ejected, and the power turns off again.









FINDING DESIRED LOCATIONS ON TAPE

VISUAL SEARCH A

Use the visual search function to cue the tape forward or to review a portion of the tape by watching the high speed picture.

1 During playback, press the ⏩/F FWD/▶▶ or ◀◀/REW/⏪ button momentarily.

⏩/F FWD/▶▶: To search in the forward direction.
◀◀/REW/⏪: To search in the reverse direction.
The sound is muted.

2 At the desired scene, press the ▶ PLAY button.

Normal playback resumes.

If the ⏩/F FWD/▶▶ or ◀◀/REW/⏪ button is held down, low speed picture search continues, and normal playback is resumed when the button is released.

NOTE

- Noise lines may appear during the visual search operation. This is not a failure of the unit. Noise lines can be removed by pressing the – + buttons.
- Noise lines may increase at SP speed, but this does not indicate a failure of the unit.
- Visual search may not be performed correctly depending on the TV.
- With a tape recorded at LP speed, noise lines may be present, and the colour may disappear.

VARIABLE SPEED SEARCH B

Visual search can be performed at variable speeds in both the forward and reverse directions.

1 During playback, press the ◀◀ or ▶▶ SEARCH button repeatedly.

As the ▶▶ button is pressed, the forward playback speed gradually increases in several steps. The sound is muted.
As the ◀◀ button is pressed, the forward playback speed gradually decreases in steps until a still picture is obtained. As the button is pressed further, the speed of the reverse search increases in steps. The relative tape speed and direction appear on the display: "◀I", "◀", or "◀◀" in the reverse direction (slow to fast); "I▶", "▶", or "▶▶" in the forward direction (slow to fast).

2 At the desired scene, press the ▶ PLAY button.

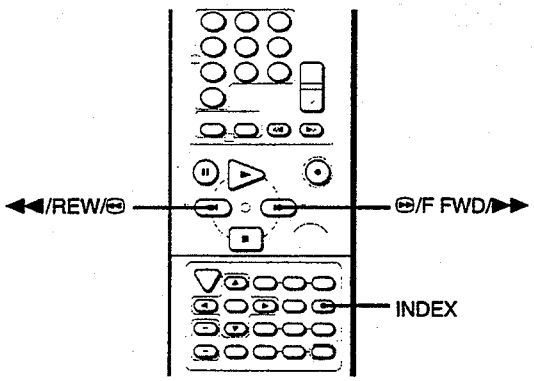
Normal playback resumes.

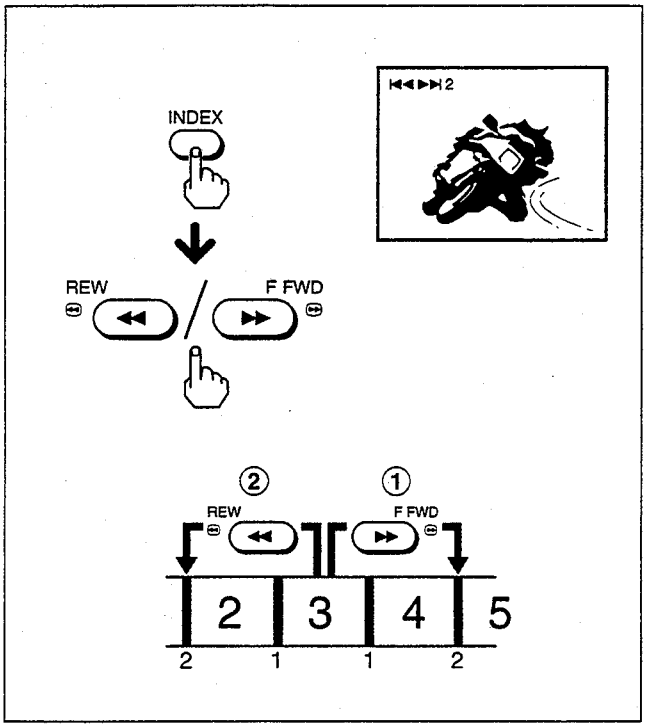
NOTE

- The unit automatically adjusts the tracking during slow motion playback. However, some noise lines may be present when using a cassette recorded on another VCR.
- The speed range for variable speed searches is as follows.

Colour system	Tape speed	Speed range	
		Forward	Reverse
PAL	SP/LP	1/20 – 7	1/20 – 7

- With a tape recorded at LP speed, noise lines may be present, and the colour may disappear.





VHS INDEX SEARCH SYSTEM

At the beginning of every recording, this unit automatically marks an invisible index signal on the tape. These signals can then be searched to easily find the beginning of any recording.

1 Set the number of signals over which to pass.

Press the INDEX button repeatedly to set a number between 1 and 9. The current number appears on the TV screen.
Example ①: To move forward from the current position in programme 3 to the start of programme 5, press the button twice.
Example ②: To rewind to the start of programme 2 from the current position in programme 3, press the button twice.

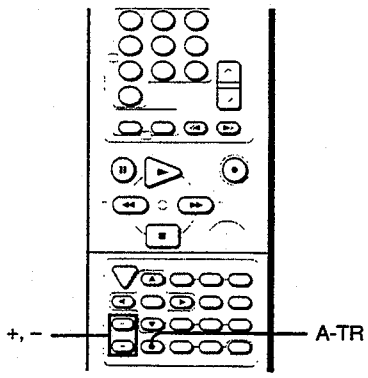
2 Choose the direction of the search.

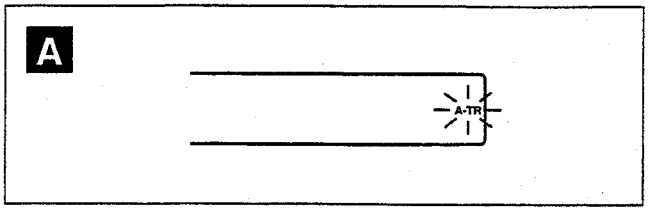
Press the ⏩/F FWD/▶▶ button to search in the forward direction.
Press the ◀◀/REW/⏪ button to search in the reverse direction.
The unit searches through the tape in the set direction, and playback begins after the set number of index signals are passed.

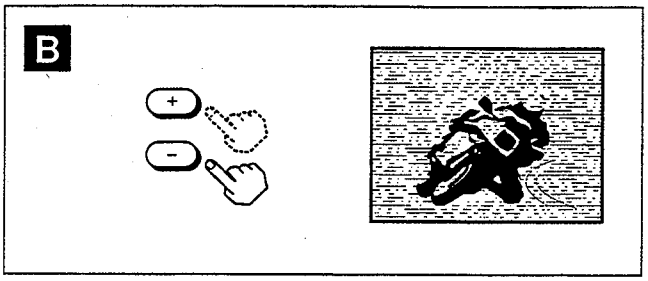
NOTE

- Index signals should be separated by at least 1 minute of tape (SP mode) or 2 minutes (LP mode) so that the unit can detect them properly.
- During an Index search operation, an index signal may not be detected if it is extremely close to the point where the search began.
- Index signals may not be detected on damaged or worn out tapes.
- Index signals may not be detected at the beginning of recordings where the tape speed is different from the previous programme.
- Neither the indicator of index search nor count number appears in the display off mode.

GETTING A BETTER PICTURE







AUTOMATIC TRACKING CONTROL A

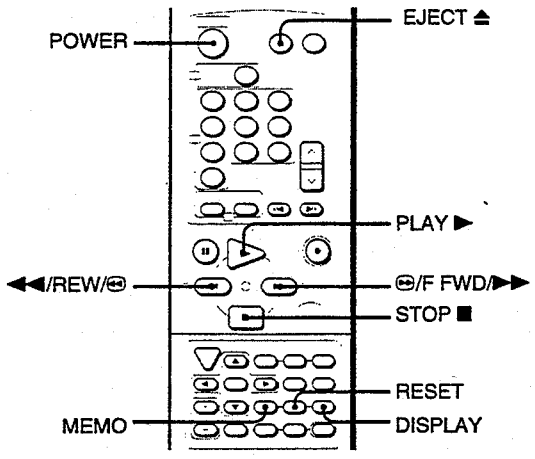
When a cassette is inserted, and playback starts, the automatic tracking function works to get the best possible picture. During automatic tracking adjustment, the "A-TR" indicator flashes on the display window. When the adjustment completed, the indicator lights.

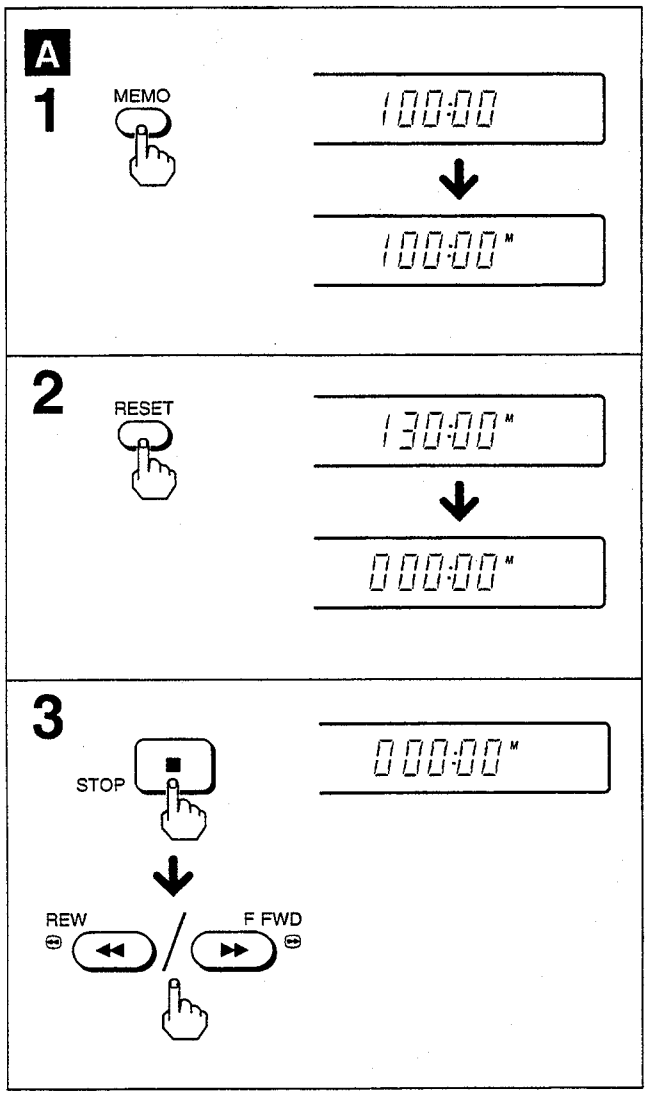
- "A-TR" does not appear while an unrecorded portion of a tape is played back.
- Depending upon the quality of the recorded tape, the amount of time it takes to automatically adjust the tracking varies. If "A-TR" continues to flash for more than 10 seconds, adjust the tracking manually.

MANUAL TRACKING CONTROL B

If the quality of a tape is poor, the picture may become clearer if you adjust the tracking manually.
During playback, press the + – buttons on the remote control repeatedly until the clearest possible picture is obtained.
The "A-TR" indicator turns off on the display.

To return to the automatic tracking mode
Press the A-TR button.





MEMORY FUNCTIONS

COUNTER MEMORY FUNCTION A

Any scene can be located on a tape. When rewinding the tape, the unit stops when the tape counter reaches approximately "0:00:00".

1 Press the MEMO button.

2 Press the RESET button at the point you want to locate later.

The counter is reset to "0:00:00".

3 After playback, press the ■ STOP, then the ◀◀/REW/⏮ or ⏭/F FWD/▶▶ button.

The tape automatically stops when the counter returns to approximately "0:00:00".

To display the tape counter on the TV screen
Press the DISPLAY button repeatedly until it appears.

FUNCTION MEMORY

When the ▶ PLAY, ⏏ EJECT or POWER button is pressed within 2 seconds after the ◀◀/REW/⏮ button is pressed, the unit rewinds to the beginning of the tape, and enters the respective operation mode.

1 In the stop mode, press the ◀◀/REW/⏮ button.

2 Press the desired operation button.

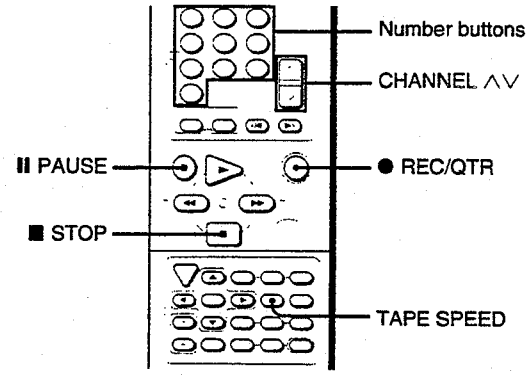
▶ PLAY: To play back the tape.
⏏ EJECT: To eject the tape.
POWER: To turn off the power.

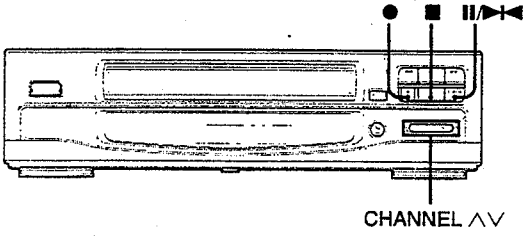
To cancel the function memory
Press the ■ STOP button.

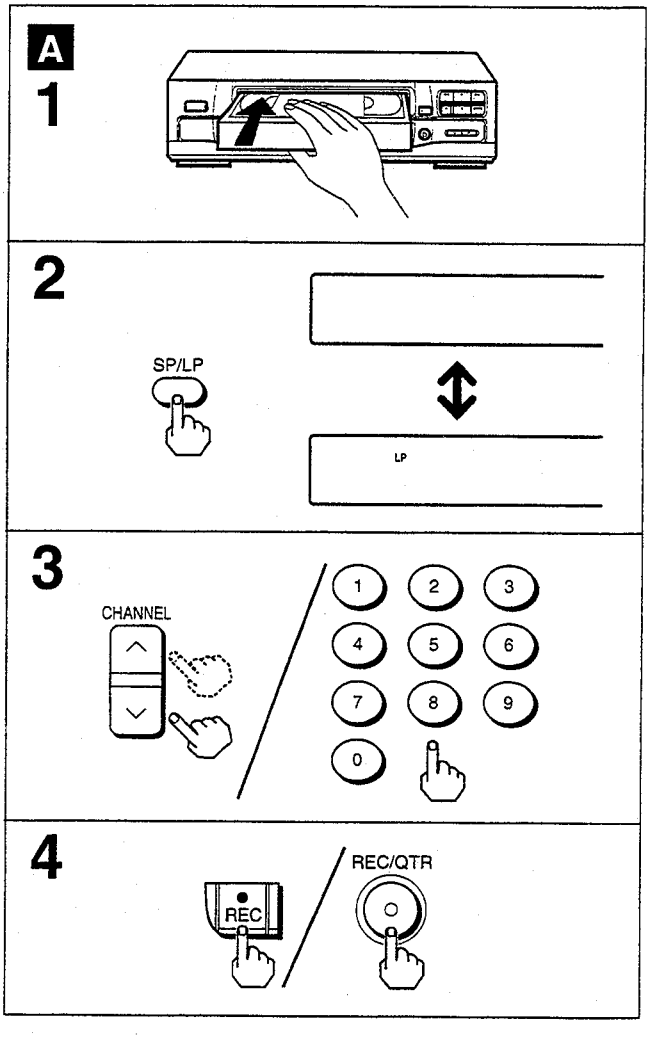
NOTE

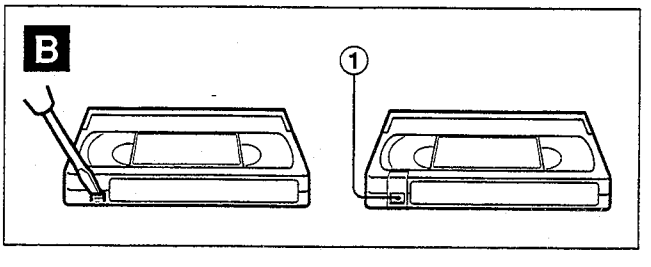
If the counter memory function is activated, the unit enters the chosen operation mode after the tape counter reaches "0:00:00".

BASIC RECORDING A









Preparation

Have the TV on and tuned to the video channel or video input mode. (See page 9.)

1 Insert a cassette with its erasure prevention tab intact.

The power turns on automatically.

2 Choose the recording speed.

Press the SP/LP button on the remote control to choose "SP" (no indicator on the display) or "LP" ("LP" indicator on the display). See "Choosing the recording speed" below.

3 Choose the channel to record.

Press the CHANNEL ∧∨ buttons, or enter the channel directly with the number buttons.

4 Start recording.

Press the ● REC/QTR button on the remote control or the ● REC button on the main unit.

5 To stop recording, press the ■ STOP button.

To pause recording

1 Press the II PAUSE button.

The unit enters the recording pause mode.

2 To resume recording, press the ● REC/QTR button again.

To record one programme while watching another

After starting the recording (step 4 above), change the channel on the TV. To monitor the recording, return to the video channel or video input mode.

Choosing the recording speed

Depending upon the recording speed, the amount of time you can record on the same video cassette varies. This unit can record at SP (Standard Play) and LP (Long Play) speeds.

When recording at SP speed, the recording time is the number of minutes printed on the cassette label, and the recorded playback picture is optimum.

When recording at LP speed, the recording time is twice as long, but the quality of the playback picture may not be as clear.

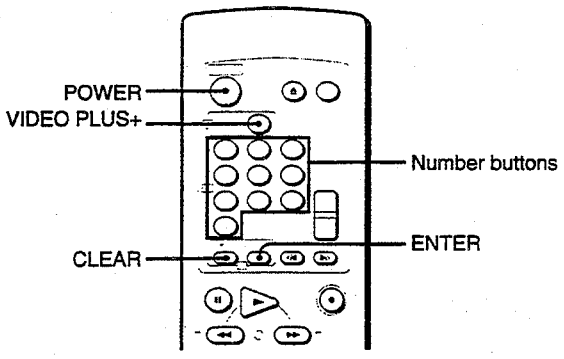
To prevent an accidental recording B

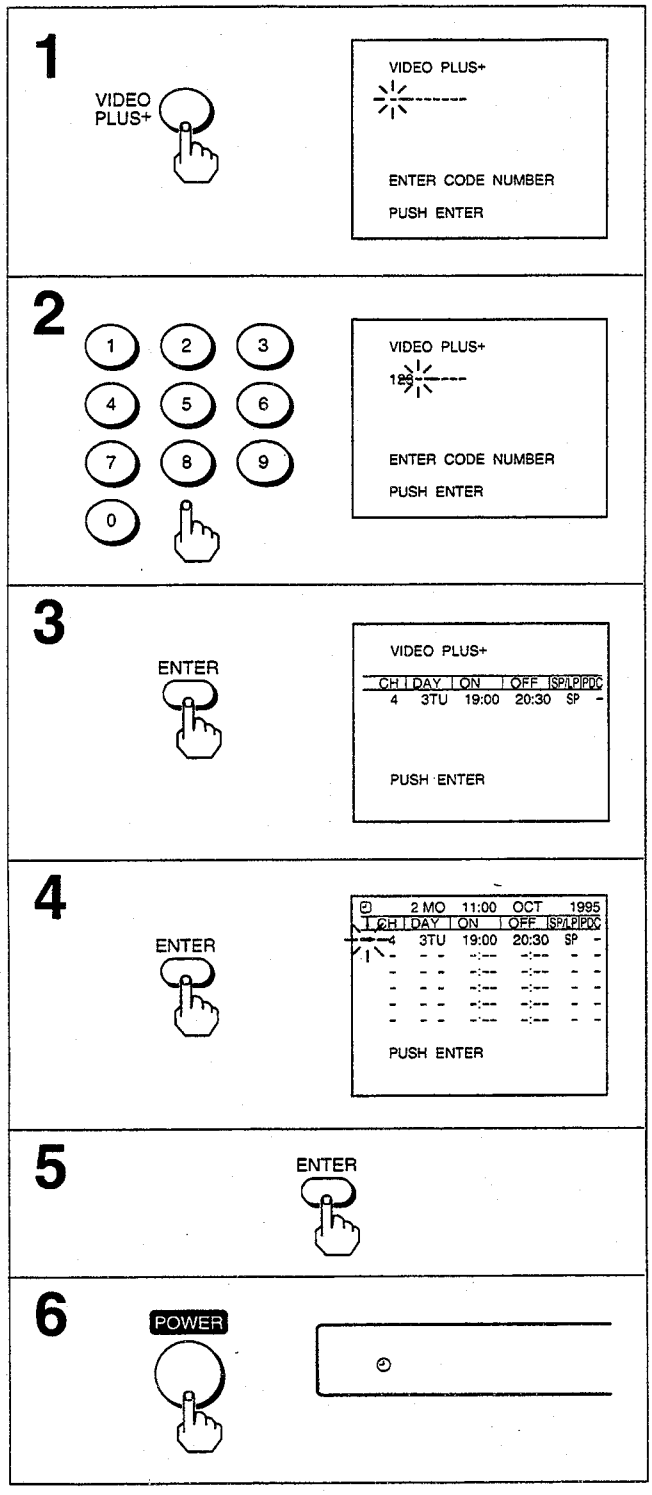
To prevent accidentally recording over a tape, break off the tab on the back edge of the tape. To record over the tape again, cover the tab hole with adhesive tape ①.

NOTE

- To prevent tape damage, avoid leaving the unit in the pause mode for a long time. After 5 minutes, this unit automatically switches to the stop mode.
- To prevent accidental erasure, during playback the unit can only enter the recording mode if you do the following:
  1 During playback, press the II PAUSE button.
  2 Press the ● REC/QTR button twice.
- If a recording is attempted when a cassette without an erasure prevention tab is inserted, the cassette is ejected.

TIMER RECORDING USING VIDEO Plus+ SYSTEM





What is VIDEO Plus+ programming system ?

VIDEO Plus+ system is a new timer programming system which simplifies timer recording programming. Instead of entering the date, channel, and recording time for the timer, simply enter the PlusCode number of the programme to record. These PlusCode numbers can be found in most TV magazine and newspaper listings.

To activate the VIDEO Plus+ programming system, it is necessary that each TV station is preset to the designated channel number. Make sure that the TV stations are preset as follows:

Channel number	TV station
1CH	BBC1
2CH	BBC2
3CH	ITV
4CH	CH4
5CH	CH5 (If available)
6CH	CATV/SAT* (SKY NEWS) (if connected)

* If this unit is connected to the TV via a 21-pin audio/video scart cable, this setting is not necessary.

SETTING A VIDEO Plus+ PROGRAMME

Before programming, check that

- The date and time are set correctly.
- The channel to record is preset.
- A cassette with its erasure prevention tab intact is inserted.
- The cassette is long enough for the recording.
- To programme a satellite or cable TV channel, check that the satellite receiver or cable box is turned on and the channel to record is chosen. Make sure to leave it on when the recording is to be made.

1 Press the VIDEO PLUS+ button.

The VIDEO PLUS+ screen appears.

2 Enter the PlusCode number for the programme you want to record with the number buttons.

If the wrong number is entered, press the CLEAR button, then re-enter the number.

3 Press the ENTER button.

The VIDEO PLUS+ programme screen appears.
If the programmed channel is not preset in this unit, "PRESET CHANNEL" appears. Preset the channel correctly. (See page 16.)
In this step, various settings can be changed, if necessary. See "Changing the settings" on page 25.

4 Check that the programme is correct, then press the ENTER button.

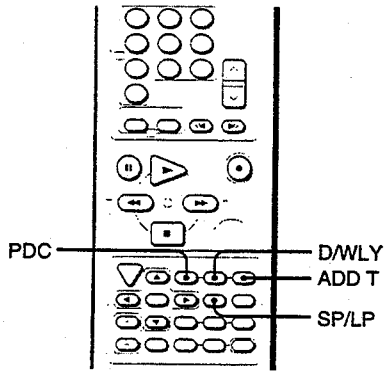
The timer recording programme list appears.

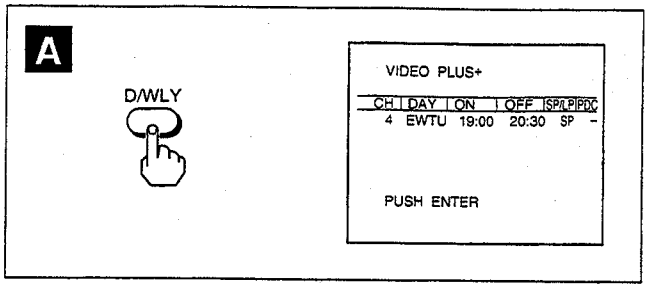
5 Press the ENTER button to erase the display.

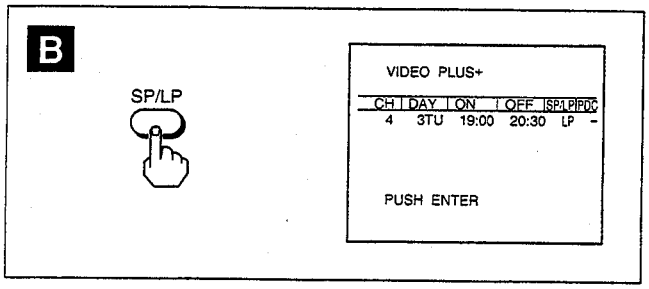
If you want to record another programme, repeat from step 1.

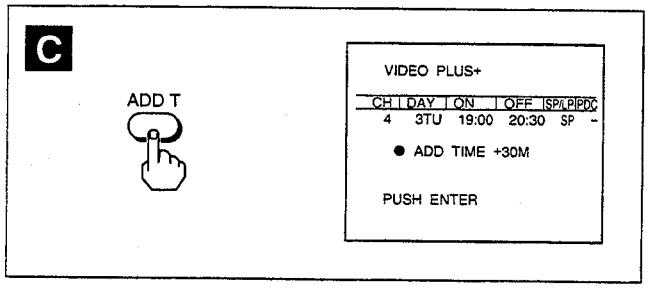
6 Press the POWER button to turn off the unit.

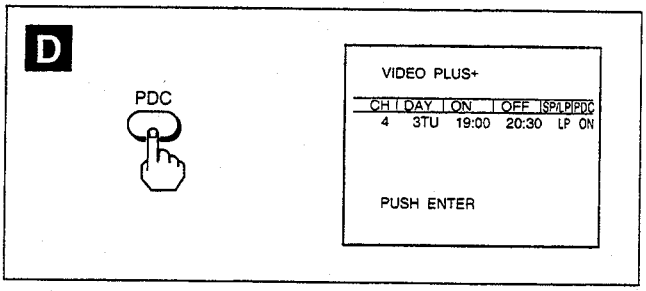
The ⏲ indicator lights on the front display of the main unit and the unit stands by for recording.











CHANGING THE SETTINGS

To change the settings of a VIDEO Plus+ recording programme, follow the following procedure after step 3.

Daily/weekly recording A

If you want to record the same programme daily (from Monday to Friday), press the D/WLY button so that "MO–FR" appears beside the day. To record it weekly, press the D/WLY button so that "EW" appears.

LP speed recording B

If you want to record the programme at LP speed, press the SP/LP button.

Adding time period C

If you want to extend the recording time for the programme, press the ADD T button repeatedly. Each press extends the recording time in 15-minute increments, up to 8 hours. To cancel the setting, press the CLEAR button.

PDC* recording D

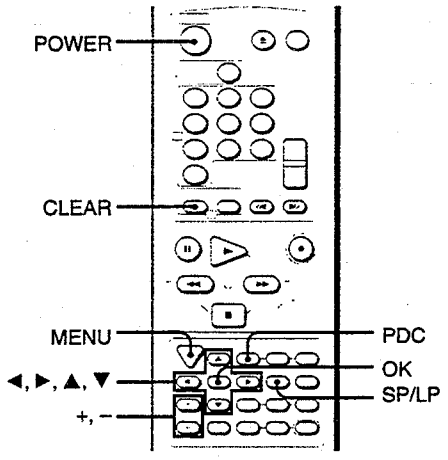
If you want to activate the PDC system for the programme, press the PDC button to set it ON.

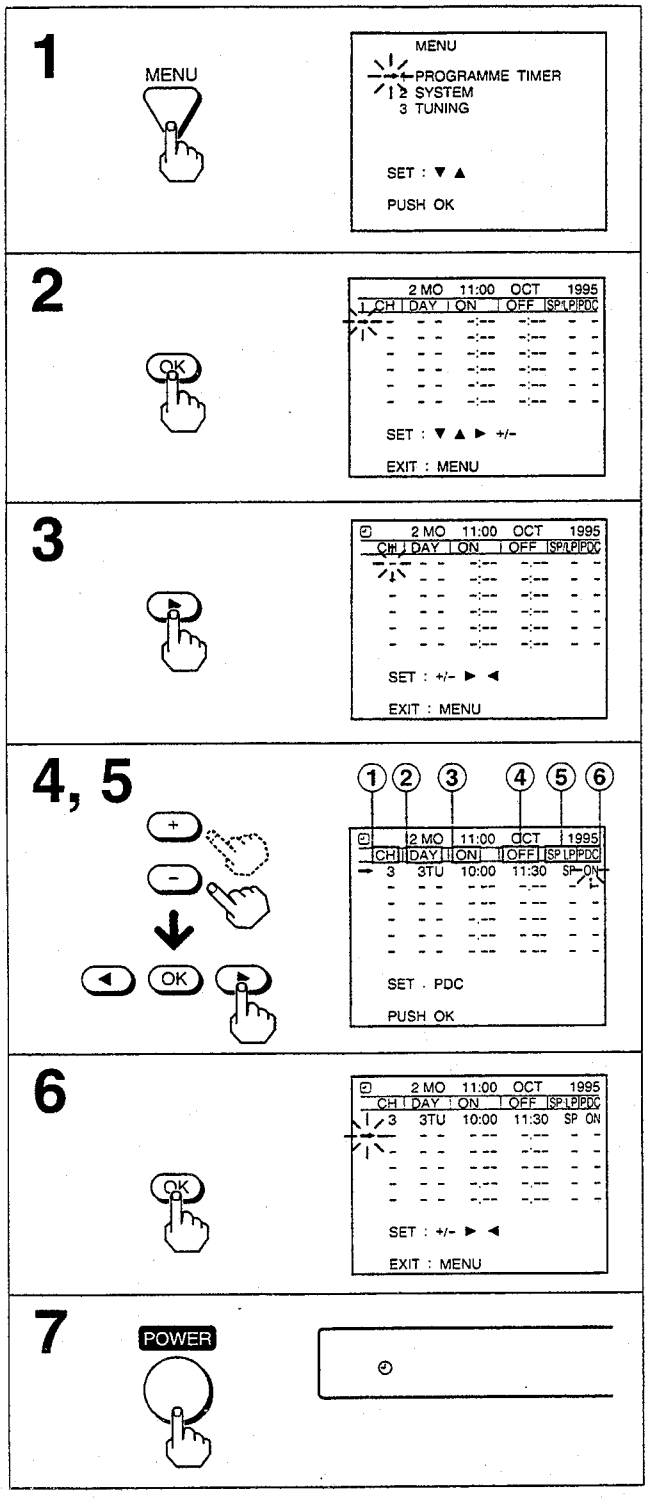
***PDC (Programme Delivery Control)**

The PDC system controls the turn-on and turn-off times for a timer programme if the programme starts early or late, or runs on longer than scheduled. This unit will automatically adjust the turn-on and/or turn-off time according to the actual broadcast if the PDC setting is on.

NOTE

- If "ERROR" appears on the screen in step 3 on page 24, an invalid PlusCode number was entered, or daily or weekly setting did not match the entered programme. Check the PlusCode number and re-enter.
- Daily/weekly recording A, LP speed recording B or PDC recording D should be set before adding the time period C.
- The PDC system is currently broadcast by only certain broadcasters in some areas. Do not set PDC to ON for a non-PDC channel.
- VIDEO Plus+ recordings will always add a safety period of 3 minutes onto the end time, and will always start 2 minutes early. However, safety period recording will be abandoned if PDC is activated or another timer recording is due to start.





TIMER RECORDING WITHOUT VIDEO Plus+ SYSTEM

(MENU 1)

Up to six timer programmes can be set within one month of the current date.

Before programming, check that

- The date and clock are set correctly.
- The channel to record is preset.
- A cassette with its erasure prevention tab intact is inserted.
- The cassette is long enough for the recording.

1 Press the MENU button.

The main MENU screen appears.

2 Choose "1 PROGRAMME TIMER" from the MENU screen.

Press the OK button.

3 Press the ► button to start setting the timer recording programme.

If the programme position is not vacant, choose the position with the ▲ or ▼ button, then press the ► button.
The CH section flashes.

4 Set the channel ① with the + or – button and press the ►button.

The DAY section flashes.

5 Using the + or – and ► buttons, set day ②, time to start recording (hour and minute) ③, and time to end recording (hour and minute) ④ in the same way as in step 4.

The tape speed ⑤ and the PDC* on/off ⑥ settings can be set with the SP/LP and PDC buttons, respectively.

6 Press the OK button.

If there are other programmes to set, repeat steps 3 to 7.

7 Press the POWER button to turn off the unit.

The ⏲ indicator lights on the display of the main unit and the unit stands by for recording.

***PDC (Programme Delivery Control)**
The PDC system controls the turn-on and turn-off times for a timer programme if the programme starts early or late, or runs on longer than scheduled. This unit will automatically adjust the turn-on and/or turn-off time according to the actual broadcast if the PDC setting is on.

NOTE

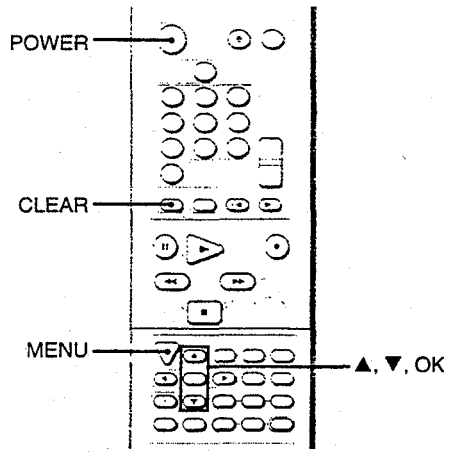
- The PDC system is currently broadcast by only certain broadcasters in some areas. Do not set PDC to ON for a non-PDC channel.
- When you set PDC to ON, you have to programme the exact published start time.

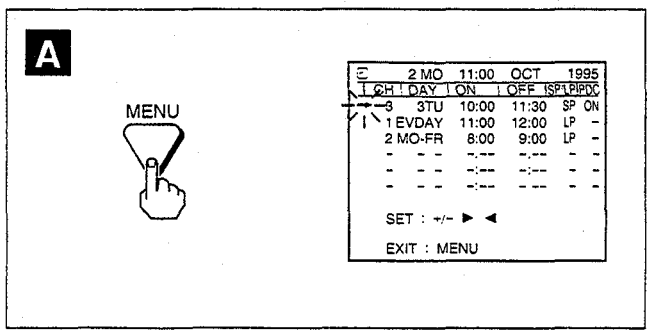
Daily or weekly recording

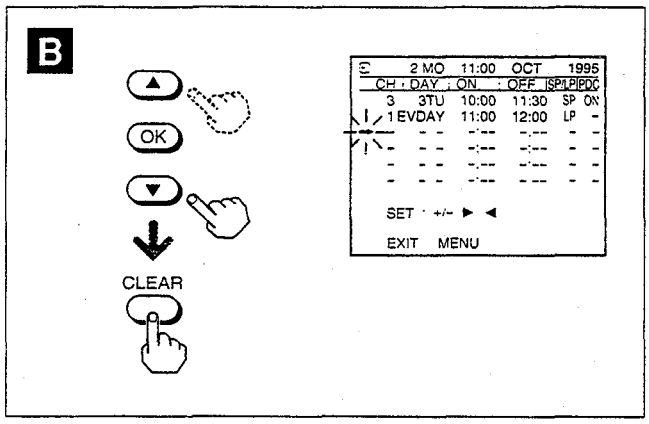
When setting the day in step 5, press the – button repeatedly until the desired day appears. Each time the button is pressed, the days cycle as follows:
the current day → MO–FR (Monday to Friday) → EVDAY (every day) → EWSA (every Saturday) → EWFR (every Friday) → ... → EWSU (every Sunday) → the day before in the next month

To correct the setting

While setting, press the ◄ or ► button to flash the item to correct, then re-enter the setting with the + or – button. When finished, press the OK button.







To check the timer programmes A

Choose "1 PROGRAMME TIMER" from the main MENU screen. All the preset timer programmes are displayed.

To clear a timer programme B

In the PROGRAMME TIMER screen, choose the timer programme to clear with the ▼ or ▲ button, then press the CLEAR button.

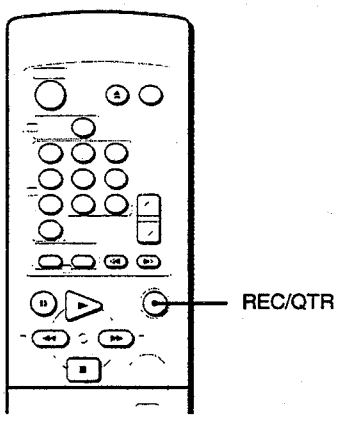
To use the unit when it is in the timer standby mode

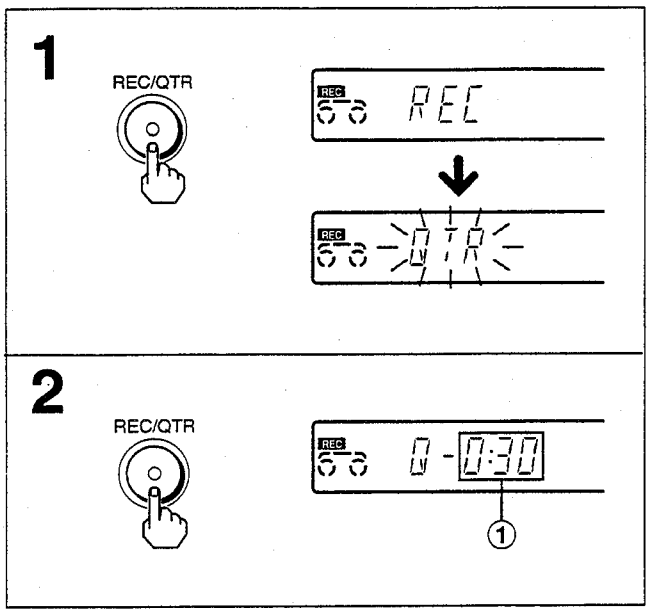
Press the POWER button to turn on the unit. The ⏲ indicator disappears and the unit is ready for use. When the recording is to be made, make sure to turn off the unit to reactivate the timer.

NOTE

- If "PROGRAMME ERROR" flashes after a programme is entered, the programme times may be overlapping, the "ON" time may have already elapsed, or the programme was not made with the timer. Re-enter or clear the programme(s).
- If a quick timer recording (QTR) and timer recording overlap, the QTR takes priority and cancels the timer programme.

QUICK TIMER RECORDING





Quick timer recording (QTR) lets you immediately start recording the current channel for a selected time period.

Preparations

- Choose the channel to record.
- Insert a cassette with its erasure prevention tab intact.

1 Press the ● REC/QTR button.

REC appears and recording starts.
Press the ● REC/QTR button again.
"QTR" flashes.

2 Within 5 seconds, press the ● REC/QTR button repeatedly to set the recording duration.

Each time the ● REC/QTR button is pressed, the recording duration ① increases in 30-minute increments up to 4 hours.
If the ● REC/QTR button is pressed after "4:00", "Q" disappears and the tape counter is shown on the display. Then the unit records in the regular recording mode.

→ QTR → 0:30 → 1:00 → 1:30 → ...
linear tape counter ← 4:00 ← 3:30 ← ... ←

The recording time indicator decreases as the recording is carried out. When "0:00" appears, the recording stops, and the power turns off.

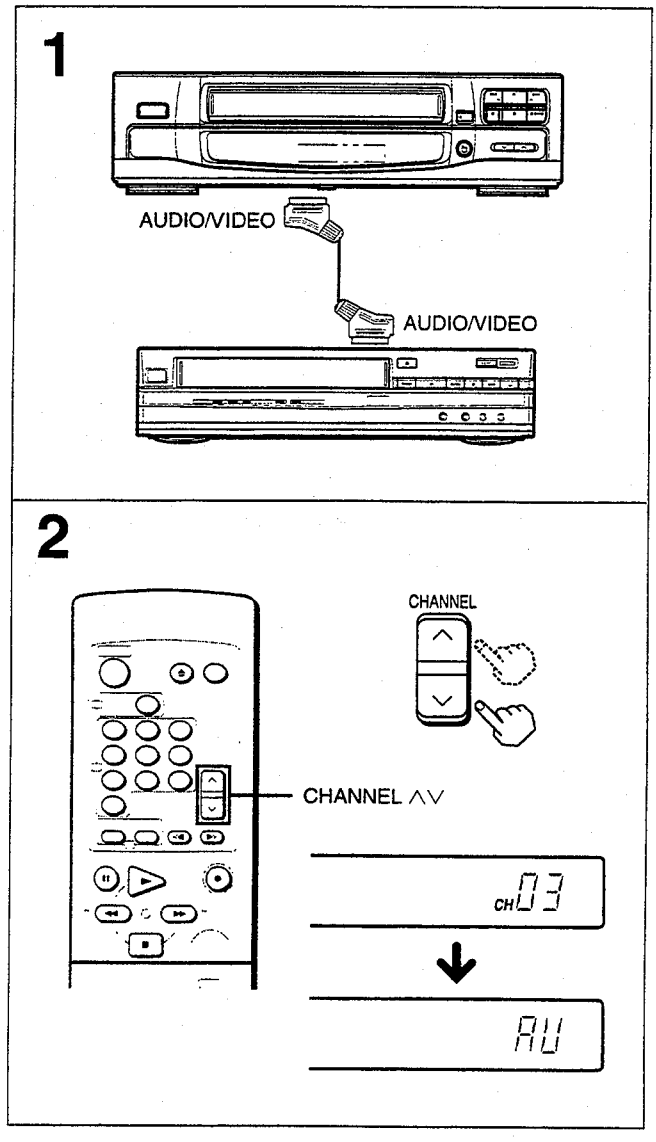
To stop recording

Press the ■ STOP, ❚❚ PAUSE, or POWER button. The recording stops or pauses, or the power turns off.

NOTE

- The channel cannot be changed during QTR recording. Change the channel after pausing the recording.
- A QTR recording takes priority over a timer programme recording if both recordings overlap.
- When pressing the ● REC/QTR button repeatedly to go back in the regular recording mode, the recording continues until the ■ STOP button is pressed.

RECORDING FROM OTHER EQUIPMENT



DUPLICATING TAPES

By connecting other video equipment to this unit, video tapes can be duplicated.

1 **Connect the video equipment.**
Connect the AUDIO/VIDEO connector on this unit to the AUDIO/VIDEO connector on the other video equipment.

2 **Press the CHANNEL ∧∨ button repeatedly until "AU" appears on the display of the main unit.**

3 **Start playback on the other video equipment and recording on this unit.**

Audio/video material may consist of copyrighted works which must not be recorded without the authorization of the owner of the copyright. Please refer to the relevant law of your country.

TROUBLESHOOTING GUIDE

If this unit does not seem to operate properly, after re-reading the instructions, check the POSSIBLE CAUSES below.

SYMPTOM	POSSIBLE CAUSES
No power	The power cord is not connected.
The playback picture is noisy.	The TV is not set to the video channel.
	The tracking is not adjusted.
	The video heads are dirty and need to be cleaned.
	The connections have not been made tightly.
No playback picture	The TV is not set to the video channel or the video input mode.
Noisy or no TV reception	Connections for an aerial, TV, and this unit are not correct.
Tape operation buttons do not work, even though the power is on and a tape is loaded.	Moisture may have condensed inside the unit. See "NOTE ON CONDENSATION" below.
Abnormal operation	External interference has affected the internal microprocessor. Unplug the mains lead from the mains. Then plug it in again.
No remote control operation	The batteries need to be replaced.
No sound	Incorrect connection

CLEANING THE VIDEO HEADS

Although this unit is equipped with an automatic head cleaner, dirt may accumulate on the video heads after long periods of use. If the playback picture is blurred or noisy, while the TV programmes received are clear, the heads may be dirty. In this case, clean the video heads using a commercially available video head cleaning tape.

CLEANING THE UNIT

When the cabinet has become dirty or stained, dip a piece of gauze or soft cloth into a dilute solution of neutral cleanser, and wipe clean. Never use thinner or benzine since they will damage the cabinet surface.

MAINTENANCE

1 **To maintain the optimum performance of this video unit, regular periodic maintenance is required. Your dealer can advise you further.**

2 **Maintenance and adjustments should not be done by the user. In all cases of difficulty or doubt, consult your dealer.**

NOTE ON CONDENSATION

Moisture may condense inside the unit when it is moved from a cold place to a warm place, after heating a cold room, or under conditions of high humidity. If the tape is played back under these conditions, the unit and the tape may be damaged. Do not use the unit until it has warmed to room temperature and the moisture has evaporated completely in a well-ventilated area.
Normal operation should be possible after 2 hours.

SPECIFICATIONS

Recording/playback system	Video: Double azimuth 4 heads helical scanning system Audio: Fixed head
Video signal	PAL colour signal, 625 lines, 50 fields
Recording/playback time	4 hours 20 minutes max. with E-260 tape, SP 8 hours 40 minutes max. with E-260 tape, LP
Fast forward/rewind time	Less than 250 sec. with E-180 tape
Tape speed	SP: 23.39 mm/sec. LP: 11.70 mm/sec.
Tape width	12.65 mm
Usable cassettes	VHS video cassettes
Timer display	24-hour cycle, day, hour, minute, digital fluorescent display
Timer recording	6 programmes within 1 month
Channel coverage	UHF 21 – 69
RF output	UHF channel between 30 and 39
RF output level	75 dBμ
Video input	0.5 – 2.0 Vp-p, 75 ohms, unbalanced
Video output	1.0 Vp-p, 75 ohms, unbalanced
Horizontal resolution	240 lines (PAL, nominal)
Video S/N (luminance)	43 dB (nominal)
Audio input	–8 dBs, 22 kohms
Audio output	–8 dBs, less than 2.2 kohms
Audio frequency response	200 Hz – 8 kHz
Audio S/N	41 dB (nominal)
Operating temperature	5°C – 40°C
Power requirements	230 V AC, 50 Hz
Power consumption	28 watts
Dimensions	360 (W) × 96 (H) × 295 (D) mm ($14^{1}/_{4} \times 3^{7}/_{8} \times 11^{5}/_{8}$ in.)
Weight	Approx. 4.5 kg (9.9 lbs.)
Accessories	Remote control (1) Mains lead (1) Aerial cable (1) Batteries (2)

Design and specifications are subject to change without notice for the purpose of performance improvement.

Note:
This product is manufactured to comply with the radio interference requirements of EEC directive 82/499/EEC.

AIWA CO., LTD

85-JU2-901-018
950313BTM-Y-GW

aiwa

HV-FX77k

VIDEO CASSETTE RECORDER

QUICK START GUIDE

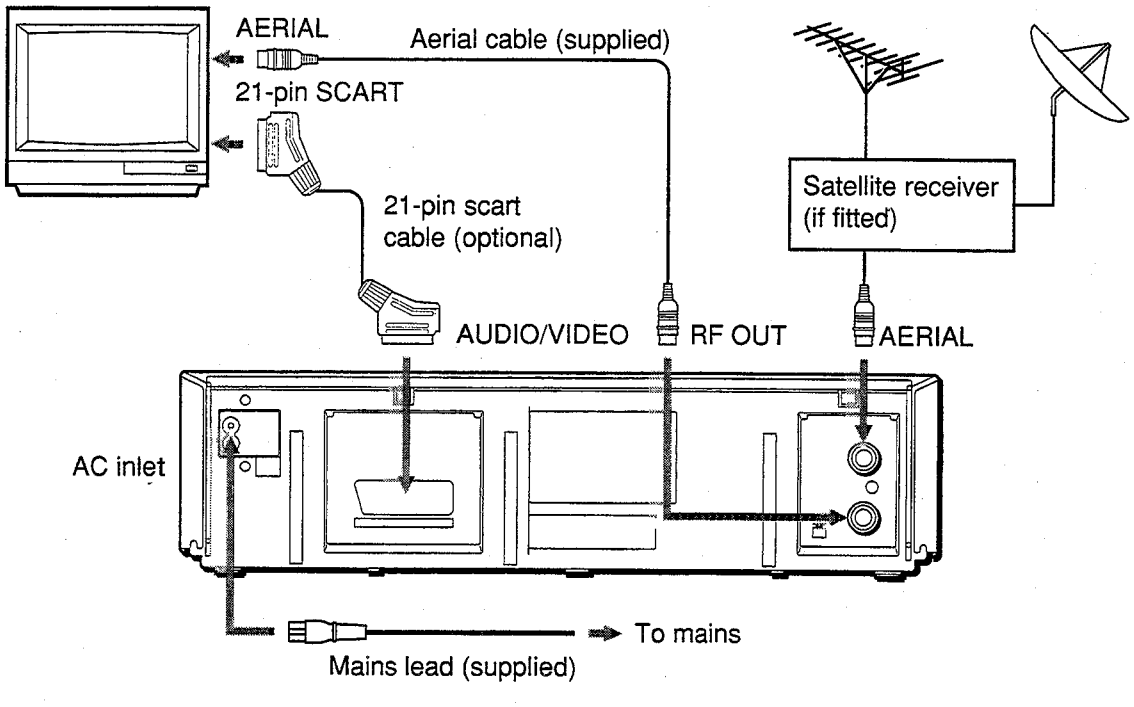
When you purchase and unpack your video cassette recorder for the first time, follow the procedures **1** to **4** below to set it up. For details, see pages 8 to 11 of the Operating Instructions. This guide also shows an easy method of programming timer recordings using the Video Plus+ system. For further information, see pages 24 and 25 of the Instructions.

HOW TO SET UP YOUR VCR

1

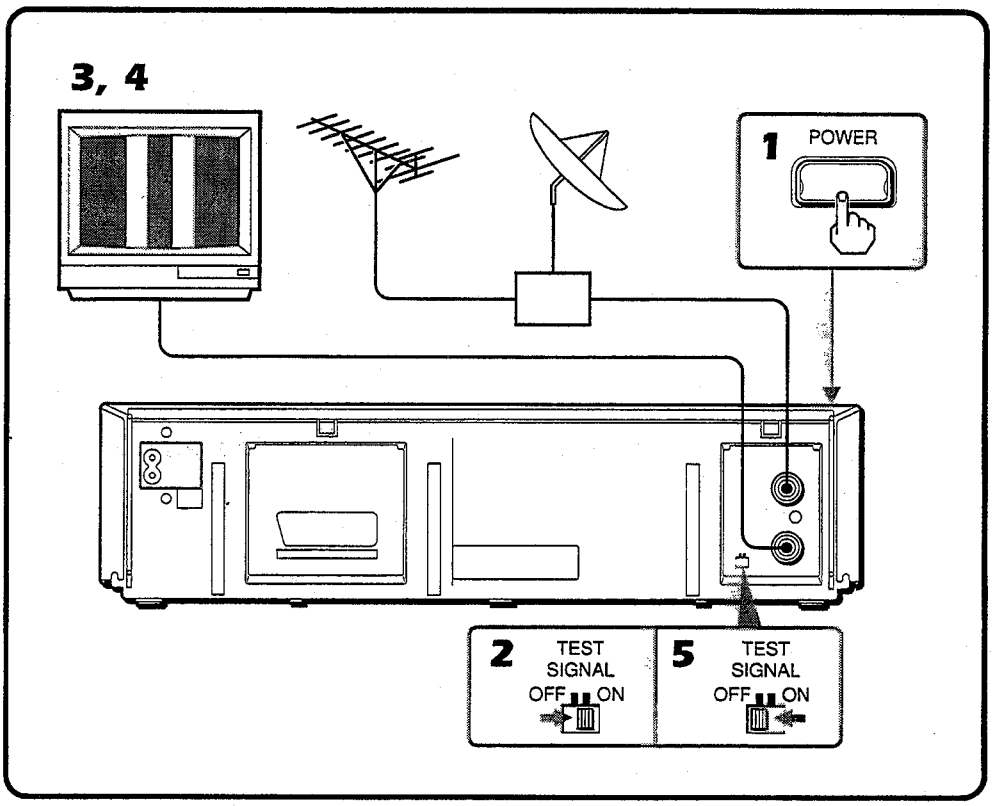
CONNECTING AERIAL – SATELLITE – VCR – TV

Connect the mains lead to the mains after all of the connections are complete.



2

TUNING THE TV TO THE VCR



1

Press the POWER button to turn on the VCR.

2

Set the TEST SIGNAL switch on the rear of the VCR to ON.

3

Turn on the TV and choose a free channel you wish to use for video playback.

Some TV receivers have a recommended channel for use with a VCR.

4

Tune in the TV using the normal TV tuning procedure until a clear black and white test pattern appears on the TV screen.

5

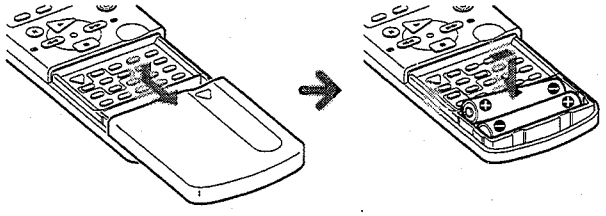
Set the TEST SIGNAL switch to OFF.

Now the channel chosen in step 3 is set to the video channel.
Whenever you want to play back a tape, set the TV to this channel.

If the VCR is connected to the TV via a 21-pin scart cable, the above procedure is not necessary. Set the TV to the 'video' input.

3

INSTALLING BATTERIES IN THE REMOTE CONTROL

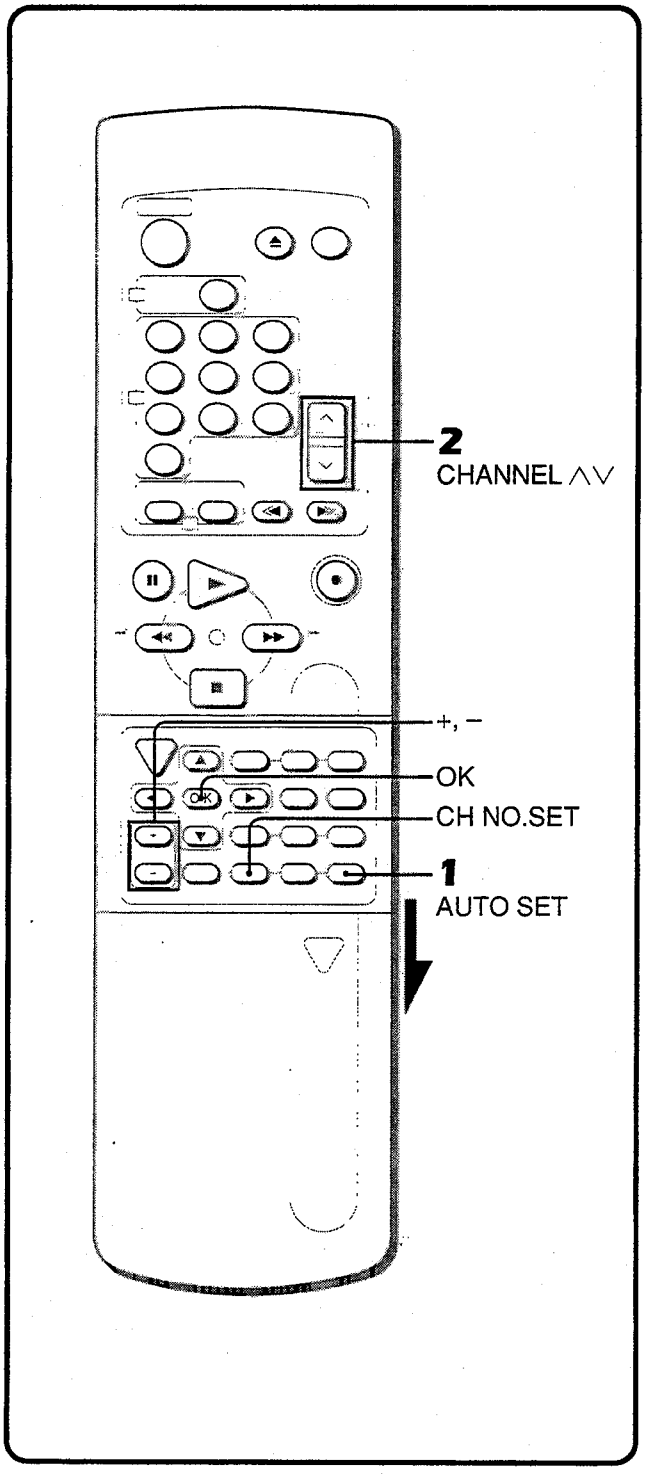


Insert two R6 (size AA) batteries (supplied) with the correct polarity, as indicated inside the battery compartment.

4

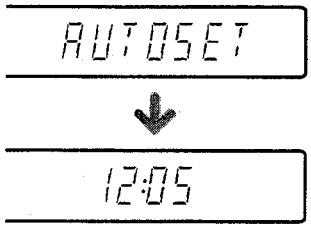
CARRYING OUT AUTO SET FUNCTION

Now you can tune in the VCR and set the correct date and time automatically using the AUTO SET button on the remote control.
Make sure to leave the VCR and the TV on, and to choose the video channel or video input mode on the TV.



1

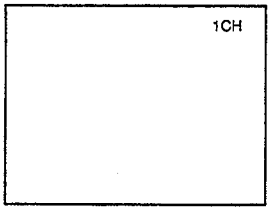
Hold down the AUTO SET button on the remote control for a few seconds.
"AUTO SET" appears on the front display of the VCR.
The VCR will be tuned in and the correct date and time will be set. This will take about 4 minutes.
After AUTO SET has been completed, the current time appears on the display.



2

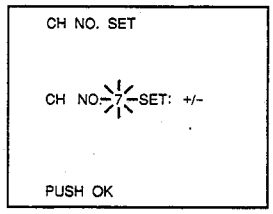
Press the CHANNEL ∧∨ buttons to check that the correct TV station is preset on each channel number.

Channel number	TV station
1CH	BBC1
2CH	BBC2
3CH	ITV
4CH	CH4
5CH	CH5 (if available)
6CH	CATV/SAT (SKY NEWS) (if fitted)

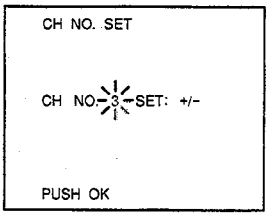


If a TV station displayed on the screen does not match the correct channel number, change the channel number to correspond with the TV station.

1 Press the CH NO. SET button on the remote control.



2 Enter the correct channel number using the + – buttons on the remote control.

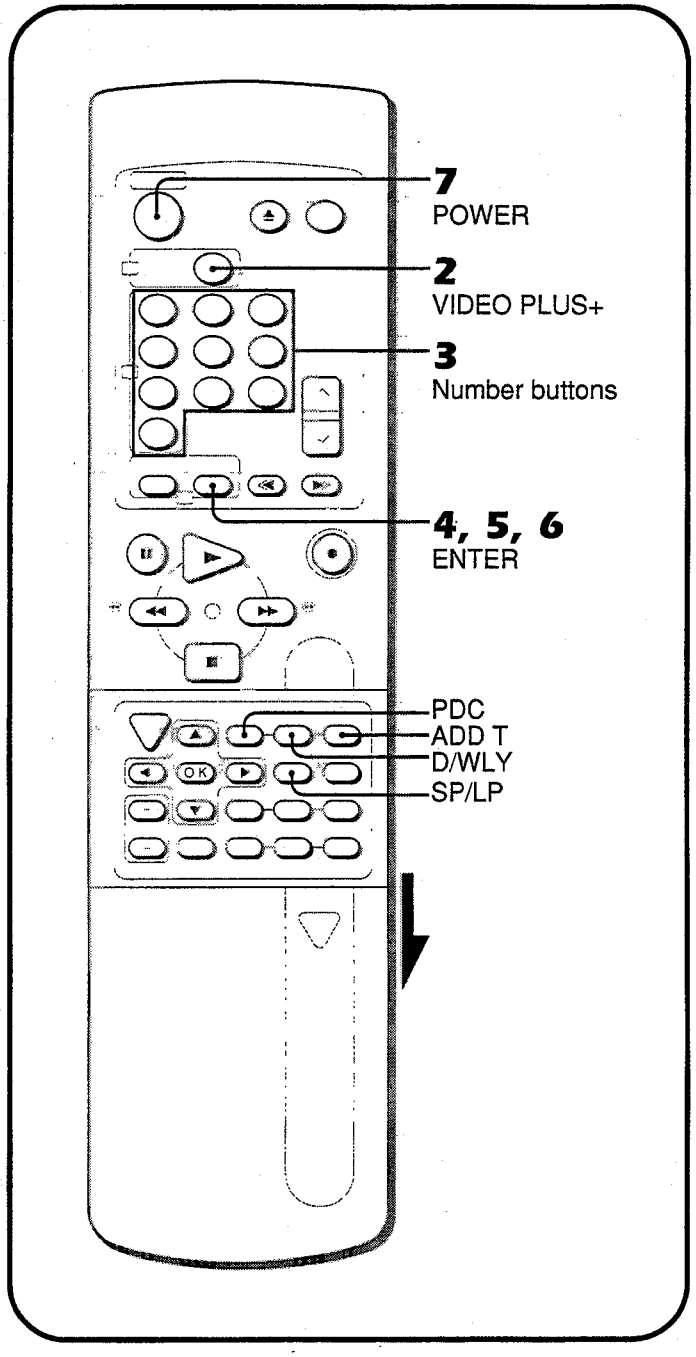


3 Press the OK button.

For details, see page 11 of the Operating Instructions.

HOW TO PROGRAMME A TIMER RECORDING USING VIDEO Plus+SYSTEM

Make sure that the cassette in the VCR is long enough for the recording.



1

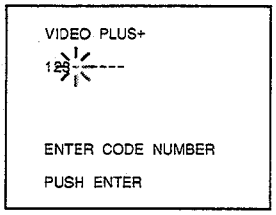
Look up the 'PlusCode' number of the programme to record in the TV magazine or newspaper listing.

2

Press the VIDEO PLUS+ button.

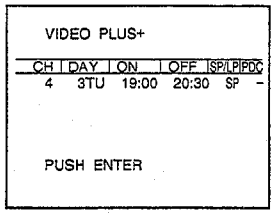
3

Enter the PlusCode number with the number buttons.



4

Press the ENTER button.



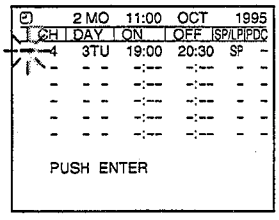
In this step, various settings can be changed, if necessary.

- For daily/weekly recording, press the D/WLY button so that "MO–FR" (Monday to Friday)/"EW" (every week) appears beside the day.
- For recording at LP speed, press the SP/LP button.
- To extend the recording time in 15-minute increments up to 8 hours, press the ADD T button repeatedly.
- To activate the PDC system, press the PDC button to set it to ON. (For details on the PDC system, see page 25 of the Operating Instructions.)

5

Check that the programme is correct, then press the ENTER button.

The timer programme list appears.



6

Press the ENTER button to erase the display.

If you want to record another programme, repeat from step 2.

7

Press the POWER button to turn off the VCR.

The ⏲ indicator lights on the display and the VCR stands by for recording.

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